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Who perpetrates violence against children? A global systematic analysis of age and sex specific data

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Who perpetrates violence against children? A global systematic analysis of age and sex specific data

Authors: Karen Devries, Louise Knight, Max Petzold, Katherine R Gannett, Lauren Maxwell, Abigail Williams, Claudia Cappa, Ko Ling Chan, Claudia Garcia-Moreno, NaTasha Hollis, Howard Kress, Amber Peterman, Sophie D Walsh, Sunita Kishor, Alessandra Guedes, Sarah Bott, Betzabé Butrón, Charlotte Watts, Naeemah Abrahams

London School of Hygiene & Tropical Medicine, London, WC1E 7HT, UK: Karen Devries Associate Professor, Louise Knight Research Fellow and Charlotte Watts Professor. Health Metrics at Sahlgrenska Academy, PO Box 414, University of Gothenburg, 405 30 Gothenburg, Sweden: Max Petzold Professor. Johns Hopkins University, Baltimore, MD 21218, USA: Katherine R Gannett PhD Candidate. McGill University, Montréal, QC H3A 0G4, Canada: Lauren Maxwell PhD Candidate. Brunel University, Uxbridge UB8 3PH, UK: Abigail Williams BSc student. UNICEF, Data and Analytics Section, Division of Data, Research and Policy, New York, NY 10017, USA: Claudia Cappa Statistics Specialist. Department of Applied Social Sciences, The Hong Kong Polytechnic University, Hong Kong, China, Ko Ling Chan Professor. World Health Organization, Switzerland, Claudia Garcia-Moreno. US Centers for Disease Control, USA, NaTasha Hollis Epidemiologist and Howard Kress team lead for the Violence Against Children and Youth team. UNICEF Office of Research—Innocenti, Piazza SS. Annunziata 12, 50122 Florence, Italy: Amber Peterman Social Policy Specialist. Bar-Ilan University, Israel: Sophie D Walsh Clinical Psychologist and Senior Lecturer. ICF, The DHS Program, USA: Sunita Kishor Director of the Demographic and Health Surveys (DHS) Program. Pan-American Health Organization, USA: Alessandra Guedes Regional Adviser on Intra-Family Violence and Betzabé Butrón, Regional advisor on child health and Sarah Bott Independent Consultant. South African Medical Research Council, South Africa: Naeemah Abrahams Deputy Director of the Gender and Health Research Unit, South African Medical Research Council P O Box 19070 Tygerberg 7405 Cape Town South Africa.

Corresponding author: Louise Knight email address: Louise.knight@lshtm.ac.uk Tel: 0207 612 7908

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Author contributions:

Karen Devries designed the study, conducted data analysis, drafted the manuscript, and obtained funding. Louise Knight input into the design of the study, conducted data analysis, performed the overall data synthesis, and drafted the graphics and annexes. Max Petzold provided input into the statistical methods and data synthesis, and conducted data analysis. Katie Gannett and Lauren Maxwell conducted the systematic review, and conducted data analysis. Abigail Williams assisted with the systematic review. Claudia Cappa, Edward Chan, Natasha Hollis, Howard Kress, Amber Peterman, Sophie D Walsh, Claudia Garcia-Moreno and Sunita Kishor contributed and/or analysed data. Charlotte Watts obtained funding. Naeemah Abrahams input into the design of the study. All authors input into the writing of the manuscript and approve of its contents. The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Declaration of interests:

All authors declare that they have no conflict of interest.

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No funding sources were involved gathering of data or analysis for this study, but representatives of the Pan-American Health Organisation (A. Guedes and B. Butrón) input into the writing of the manuscript and are included as authors. Karen Devries had full access to all of the data in the study and had final responsibility for the decision to submit for publication.

Abstract:

Objective: The epidemiology of physical, sexual and emotional violence against children is likely to differ substantially by sex and age of the victims and by perpetrators. To date, investment in effective prevention strategies has been hindered by lack of clarity in the burden of childhood violence across these dimensions. We produced the first-ever comprehensive age and sex specific prevalence estimates by perpetrator type for physical, sexual and emotional violence against children globally.

Design: We conducted random effects meta-regressions of age and sex-specific prevalence estimates per perpetrator. Estimates were adjusted for relevant quality covariates, variation in definitions of violence and weighted by region, age and sex specific population data to ensure estimates reflect country population structures.

Data Sources: Secondary data from 600 population or school-based representative datasets and 43 publications obtained via systematic literature review, representing 171 countries and 13,830 separate age and sex specific prevalence estimates.

Eligibility criteria for selecting studies: Estimates for past year violence against children aged zero to 19 were included.

Results: The most common perpetrators of physical and emotional violence for both boys and girls across a range of ages are household members, with prevalence often surpassing 50%, followed by student peers. Children reported experiencing more emotional than physical violence from both household members and students. For children attending school, emotional violence from other students is more common than emotional violence from household members. The most common perpetrators of sexual violence against girls aged 15 to 19 years are intimate partners, however few data on other perpetrators of sexual violence against children are systematically collected internationally. Few age and sex-specific data are available that specifically report on violence perpetration by schoolteachers, however existing data indicate high prevalence of physical violence from teachers towards students. Data from other authority figures, strangers, siblings and other adults are limited, as are data on neglect of children.

Conclusions: Without further investment in evidence generation, taking into account disaggregated age, sex and perpetrator specific data, progress towards Sustainable Development Goals 4, 5 and 16 may be slow. Despite data gaps, findings indicate exposure to childhood violence from peers in school and household members should be high priorities for prevention, as well as intimate partner violence against girls.

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What is already known on this subject

Previous large-scale studies synthesizing global violence data have estimated the proportion of the population who experience violence at any time during 'childhood', adolescence or over the past year. However, the basic epidemiology and patterning of different forms of violence by different perpetrators, are likely to differ vastly by both sex and specific age. Age, sex and perpetrator specific prevalence estimates of violence against children are not comprehensively available.

What this study adds

We combine estimates from 600 datasets and 44 publications representing 171 countries and 13,830 separate age- and sex- specific data on the prevalence of recent physical, sexual and emotional violence according to perpetrator, making this the most comprehensive such synthesis to date. Estimates based on available data suggest that the most common perpetrators of physical and emotional violence for both boys and girls across a range of ages are household members, followed by peers in school, and that the most common perpetrators of sexual violence against girls aged 15 to 19 years are intimate partners. However, few data on sexual violence exist on other age groups or for boys. Efforts to enhance current data collection and analysis are required to measure progress towards the Sustainable Development Goals pertaining to reduction in childhood violence.

INTRODUCTION

Globally, levels of violence against children are worryingly high. More than 50% of children report experiencing some form of physical, sexual, emotional violence or neglect in the past year[1], and global meta-analyses suggest that about 10% of boys and 20% of girls have experienced sexual violence in their lifetime[2, 3]. Violence during childhood has a negative impact on brain development[4, 5], and well-documented adverse health and social consequences, including increased risk of later mental health disorders, sexually transmitted infection, substance use, obesity, poor academic outcomes and psychosocial well-being[6-10]. Since the landmark world report on violence against children[11], this issue has increasingly become the focus of global aid and policy agendas. Commitments to reduce violence in childhood now feature in Sustainable Development Goals (SDGs) 4,5 and 16.

Previous large-scale studies synthesizing global violence data have estimated the proportion of the population who experience violence at any time during ‘childhood’ [2, 3], during adolescence[12] and more recently, over the past year[1]. However, the epidemiology of violence is likely to differ by age and sex. The aims of this paper are to synthesise information on: 1) the gaps in data on physical, sexual and emotional violence and neglect by age, sex, and geographical region; and 2) the prevalence of past-year physical, sexual and emotional violence and neglect against male and female children and adolescents, at each age from 0-19 years, by perpetrator.

Given the variations in the definitions and meanings of violence across contexts, we purposively take a broad view, including acts which may be framed as aggression, abuse and discipline to varying degrees in different contexts (Box 1). We build on previous synthesis efforts[1, 13] by examining data coverage and prevalence by sex at each individual year of age from 0 to 19 years, rather than across broad age categories.

Box 1. Defining violence

What is considered violence, abuse, punishment, aggression, and discipline can differ considerably across countries, by the nature of the relationship between people who are using or experiencing different acts of physical, sexual and emotional behaviours, and across time. In this paper, we include acts which are measured in the context of survey modules asking parents about disciplining their children, asking students about fighting with their peers, and asking adolescents about their experiences in intimate partnerships amongst other measures. Within each of these relationships, there will be a heterogeneity of different power arrangements. Some argue that abuse of power is central to defining different physical, sexual and emotional acts as ‘violence’, and others may argue that inherent in each of these dyads are unequal power relationships which mean that a range of acts can be classified as ‘violence’. Similarly, what might be framed as a ‘discipline practice’ (and therefore, as more acceptable) in one context at one time (for example, hitting children on the buttocks with stick), might be framed as ‘violence’ (and therefore less acceptable) in that same context at a different time.

There is clear evidence that exposure to different acts of physical, sexual and emotional violence has adverse health and developmental outcomes. However, there is less evidence about how the relationship context affects outcomes—for example, does hitting a child on the buttocks with a stick have fewer ill effects if parents and children perceive it as healthy discipline within a loving relationship, versus abuse? Similarly, whether the social meaning of violence affects outcomes is less well understood—for example, does intimate partner violence have more adverse effects in contexts where it is not socially acceptable, versus where it is normative and viewed as a form of discipline from male to female partners?

In this paper, we take a broad view, and include a wide range of acts which could have adverse consequences ranging from severe to none. It is important to recognise however that many of these acts will not be seen as 'violence' or 'abuse' (that is, they will be seen as acceptable) by different groups in different countries. This has important implications for interventions—in many cases, particularly in reference to what is seen as acceptable child discipline—perpetrators of violence may see their use of violence as beneficial to victims. Interventions focusing on increasing understanding of the adverse health and developmental consequences of violence may be particularly useful for addressing use of violence which are viewed as socially acceptable. Other forms of violence which are not considered as socially acceptable may require different interventions

METHODS

We performed secondary analysis of existing international datasets and a systematic review of published and grey literature. Our protocol is registered in PROSPERO 2015:CRD42015024315.

Data from large datasets. We analysed data from the Demographic and Health Surveys (DHS, 44 countries); the Multiple Indicator Cluster Surveys (MICS, 35 countries); the WHO Multi-Country Study on Women’s Health and Domestic Violence Against Women (WHO MCS, 11 countries); the Reproductive Health Surveys (RHS, 6 countries); the Global Student Health Surveys (GSHS, 78 countries); the Health Behaviour in School-Aged Children (HBSC, 39 countries); the Violence Against Children Surveys (VACS, 4 countries); EU Kids Online (25 countries); Progress in International Reading Literacy Study (PIRLS, 46 countries); Trends in International Mathematics and Science Study (TIMSS, 69 countries); and combined TIMSS/PIRLS surveys (33 countries). Estimates for age and sex specific prevalence of different forms of violence, and perpetrators of violence (where applicable) were produced, accounting for the complex sampling scheme employed in each survey. These estimates were combined with data extracted from studies identified via the systematic review. We could not obtain data from the Balkan Epidemiological Study on Child Abuse and Neglect (BECAN).

Systematic review. Database search strategy. We searched the following databases from first record to 7 December 2015: MEDLINE, EMBASE, PsycINFO, and Global Health. Controlled vocabularies of each database were used to tailor search terms; for example, MeSH terms for MEDLINE. Search terms included words related to violence and maltreatment, children, and study filters to identify observational studies and trials which might have survey data (further described in Annex 1). There were no restrictions on language or year of publication and therefore data is represented up to December 2015.

Inclusion criteria. Studies reporting on the prevalence of physical, sexual and emotional violence, and neglect, as well as perpetrators of various forms of violence against children aged 0-19 years, were considered for inclusion. We also included studies reporting on witnessing domestic or intimate partner violence. All author definitions of these forms of violence, and of perpetrator, were accepted. Only studies using a survey methodology to gather data from participants sampled to represent a geographic area, or school-based populations of young people, were considered. Self-reports on experience of violence were included, and studies using proxy reports for younger children were included (for example, the MICS, which gathers parent’s and household members reports of their use of psychological and physical aggression against children aged 2-14 years). Only studies in which reports of violence were over a narrow age range (5 years or less) were included in meta-regressions; most estimates were specific to children at each single year of age. Similarly, most studies had a recall period of one year, but those with recall periods below one year were also included in meta-regressions. In the partner violence meta-regression one estimate had a recall period of 18 months, which was included and adjusted for in analysis.

Screening and Data extraction. Screening of abstracts and full text articles was performed by KG and AW. Data on study characteristics and quality were extracted by KG and LM, into a customised Google form database created by LM. Definitions of violence varied considerably across studies, and each definition was recorded in detail.

Quality appraisal. We describe the quality of prevalence estimates by considering whether studies were nationally representative versus representative of a smaller geographic area, since prevalence may differ within geographical areas within a country. We describe participation rates and levels of missing data. We assessed whether study questions ask about generic ‘violence’ exposure versus specific acts of violence, because the latter avoids participants’ subjective decisions about what constitutes ‘violence’. We assessed whether single or multiple items were used to assess exposure to violence, because asking about multiple specific acts will yield more accurate prevalence

estimates. Whether an anonymous disclosure method was used, versus a face to face interview, was described, because anonymous methods tend to produce more disclosures[14]. Whether children were able to self-report or a proxy report was relied upon is described. Children's own reports may be increasingly accurate as they age, especially for more hidden or stigmatising forms of violence. However, very young children may not remember all of the violence they have experienced; in which case proxy reports may be more reliable. Levels of interviewer training were assessed, as well as whether the study was specifically about violence or maltreatment exposure, or whether it was on another topic. More interviewer training results in higher levels of disclosure in studies on violence against women, and studies which intend to measure violence are likely to differ from general studies on a number of quality criteria.

Data synthesis. Data from the systematic review and dataset analyses were combined. We describe overall coverage of data by geographic region, sex, age, perpetrator category, and form of violence (Tables 1 and 2). Where studies have not reported prevalence as a percentage or proportion with a standard error or 95% confidence interval, we calculated these based on data provided in reports or via contact with authors where possible. Estimates from groups of fewer than 10 participants were excluded.

Where the number of sex-specific prevalence estimates per perpetrator for a given form of violence was greater than 50, we performed random effects meta-regressions (using the metan command in Stata 14) to estimate the prevalence of exposure to violence for each sex and year of age. Unadjusted estimates are presented in Annex 2. Estimates were adjusted for relevant quality covariates and also by definitions of violence such that overall estimates would reflect higher quality studies with the 'best' definition, for example measures that include more specific acts of violence. Details of data sources and definitions of violence for each meta-regression model are specified in Annex 3. Estimates were then weighted by WHO region age and sex specific population data to ensure overall estimates would be reflective of country population structures. The mean estimate and 95% confidence interval (CI) for each age is plotted separately in a bar graph. In cases where a given age had fewer than 10 estimates unadjusted estimates from meta-analysis are presented in the same bar graphs (noted in footnotes) as estimates from meta-regressions. These are unadjusted for country-population age structures and should not be interpreted as globally representative. Covariates for each regression model are described in Annex 4. Prevalence figures and confidence intervals for each age specific estimate presented from meta-regression in figures are in Annex 5. Regional estimates were computed using the same meta-regression model, and are presented in Annex 6.

Where the number of prevalence estimates per perpetrator (over all age and sex categories) for a given form of violence was fewer than 25, we display estimates on a forest plot separately by age, and did not attempt to quantitatively synthesise them.

Most studies reported violence exposure over a one-year age range. Where studies reported violence over a larger age range, we took the midpoint of the age range and assumed the prevalence pertained to that age (for example, for a sample 15-17 year olds reporting only an average prevalence, we modelled as the prevalence at age 16 years). For studies where the recall period was below one year, we counted that prevalence as past-year prevalence.

For models of violence experienced by students, perpetrated by other students, estimates are displayed as a proportion of the entire population by sex and age, rather than as a proportion of students, since not all children attend school (and therefore by definition are not students exposed to violence from other students). Estimates provided with students as the denominator were adjusted by the WHO regional estimation proportion of students attending primary and secondary schools[15], to make them reflect the prevalence of violence against students in the whole population. Similarly, for models of dating and intimate partner violence, estimates are displayed as

a proportion of the entire population by age and sex, rather than as a proportion of ever-partnered young people by age and sex. Estimates provided with the ever-partnered proportion of the survey population as the denominator were adjusted by the proportion of country populations which had ever had sex by age 20 years (using DHS data[16]), to make them reflect the prevalence of different forms of partner violence in the entire population (rather than only the ever-partnered population).

Patient involvement

No children or adolescents were involved in setting the review research question, design or the outcome measures, nor were they involved in interpretation or writing up of results. There are no specific plans to disseminate the review results to children or adolescents. Some of the original studies or surveys used in this review do routinely share results with children participants, namely Health Behaviour in School-Aged Children surveys. We thank all participants involved in the original studies and surveys in the acknowledgements section of this paper.

RESULTS

Data coverage

In total, we retrieved 643 studies from 171 countries, containing 13,830 separate age and sex specific prevalence estimates (Figure 1).

<<Figure 1>>

Overall availability of estimates is described in Table 1. Europe had substantially more data which met our inclusion criteria compared to other regions, and the South East Asia Region had very few estimates compared to other regions. Physical violence was most commonly reported in an age and sex specific way, followed by emotional violence. Far fewer estimates were available for sexual violence, and no estimates for neglect or witnessing intimate partner violence were age- and sex-specific.

Table 1. Data coverage of prevalence estimates of violence against children

| | Number of estimates | Number of Countries | Number of Studies |
|--|---------------------|---------------------|-------------------|
| Total | 13830 | 171 | 643 |
| Sex | | | |
| Male | 6334 | 154 | 609 |
| Female | 7496 | 151 | 643 |
| Form of violence | | | |
| Emotional | 4613 | 14 | 418 |
| Physical | 6024 | 170 | 591 |
| Sexual | 567 | 57 | 72 |
| Neglect | 0 | 0 | 0 |
| Witnessing IPV | 0 | 0 | 0 |
| Physical/emotional | 2267 | 123 | 243 |
| Physical/emotional/neglect | 38 | 1 | 1 |
| Physical/emotional/sexual | 271 | 45 | 45 |
| Physical/sexual | 48 | 13 | 14 |
| Physical/emotional/sexual/witnessing | 2 | 1 | 1 |
| Region (WHO) | | | |
| African region | 2,487 | 34 | 75 |
| Americas region | 2,379 | 36 | 93 |
| Eastern Mediterranean region | 2,333 | 20 | 91 |
| European region | 4,878 | 52 | 289 |
| South-east Asia region | 417 | 8 | 23 |
| Western Pacific region | 1,336 | 20 | 72 |
| Main perpetrator groupings | | | |
| Parent/Caregiver/ Household member | 2354 | 48 | 49 |
| Student | 9149 | 136 | 484 |
| Peer (any peers either from school, home, other) | 455 | 27 | 312 |
| Boyfriend/Girlfriend/Intimate partner | 1355 | 54 | 69 |
| Teacher | 48 | 1 | 1 |
| Stranger | 0 | 0 | 0 |
| Adult | 2 | 1 | 1 |
| Authority figures | 42 | 3 | 3 |
| Any perpetrator | 237 | 17 | 24 |
| Other | 188 | 5 | 5 |
| Included in meta regression | | | |
| Physical violence from students, boys | 2157 | 134 | 471 |
| Physical violence from students, girls | 2092 | 134 | 471 |
| Physical violence from household members (proxy reports), boys | 559 | 43 | 43 |
| Physical violence from household members (proxy reports), girls | 559 | 43 | 43 |
| Physical violence from intimate partners, girls | 341 | 47 | 58 |
| Emotional violence from students, boys | 1287 | 82 | 309 |
| Emotional violence from students, girls | 1239 | 82 | 309 |
| Emotional violence from household members (proxy reports), boys | 546 | 43 | 44 |
| Emotional violence from household members (proxy reports), girls | 546 | 43 | 44 |
| Emotional violence from intimate partners, girls | 311 | 45 | 50 |
| Sexual violence from intimate partners, girls | 323 | 45 | 53 |

| | | | |
|--|----|---|---|
| Included in meta-analysis | | | |
| Physical violence from authority figures, boys | 30 | 5 | 5 |
| Physical violence from authority figures, girls | 30 | 5 | 5 |
| Physical violence from caregivers (child self-reports), boys | 30 | 5 | 5 |
| Physical violence from caregivers (child self-reports), girls | 30 | 5 | 5 |
| Emotional violence from caregivers (child self-reports), boys | 15 | 2 | 2 |
| Emotional violence from caregivers (child self-reports), girls | 15 | 2 | 2 |
| Not presented in this paper | | | |
| Sexual violence from any perpetrator, girls | 66 | 8 | 8 |
| Sexual violence from any perpetrator, boys | 52 | 8 | 8 |

Breaking down the number of available estimates by sex and perpetrator (Table 1), the most commonly measured forms of violence were physical and emotional violence from students towards other male and female students, followed by physical and emotional violence from caregivers towards boys and girls, followed by intimate partner violence against girls, and then physical violence against boys and girls from ‘authority figures’. There were too few estimates on forms of violence perpetrated by strangers, teachers, other adults, or from overall categories of ‘any perpetrator’ (that is, from all perpetrators combined), to compute overall prevalence figures, so these are not presented in this paper.

Table 2: Number of prevalence estimates for all forms of violence by age and data source

| age | estimates | Countries | Studies | Sys Rev | DHS | WHO | RHS | MICS | HBSC | GSHS | PIRLS | TIMSS | EU kids | VACS | Optimus | GSS |
|-------|-----------|-----------|---------|---------|-------|-----|-----|-------|-------|-------|-------|-------|---------|------|---------|-----|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 178 | 44 | 44 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| 3 | 178 | 44 | 44 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| 4 | 178 | 44 | 44 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| 5 | 178 | 44 | 44 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| 6 | 184 | 46 | 46 | 4 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 |
| 7 | 200 | 49 | 52 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 12 | 10 | 0 | 0 | 8 | 0 |
| 8 | 392 | 69 | 99 | 8 | 30 | 0 | 0 | 140 | 0 | 0 | 118 | 88 | 0 | 0 | 8 | 0 |
| 9 | 1,102 | 105 | 261 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 517 | 330 | 50 | 0 | 8 | 27 |
| 10 | 1,205 | 108 | 277 | 6 | 30 | 0 | 0 | 140 | 0 | 0 | 557 | 360 | 50 | 0 | 8 | 54 |
| 11 | 1,429 | 110 | 309 | 2 | 30 | 0 | 0 | 140 | 336 | 0 | 493 | 316 | 50 | 0 | 8 | 54 |
| 12 | 1,350 | 142 | 337 | 4 | 30 | 0 | 0 | 140 | 0 | 366 | 295 | 403 | 50 | 0 | 8 | 54 |
| 13 | 1,865 | 151 | 403 | 10 | 30 | 0 | 0 | 140 | 336 | 416 | 135 | 657 | 50 | 29 | 8 | 54 |
| 14 | 1,410 | 147 | 330 | 15 | 30 | 0 | 0 | 140 | 0 | 420 | 38 | 625 | 50 | 30 | 8 | 54 |
| 15 | 1,633 | 152 | 262 | 33 | 102 | 8 | 20 | 0 | 336 | 420 | 16 | 547 | 50 | 31 | 16 | 54 |
| 16 | 870 | 111 | 230 | 30 | 286 | 20 | 24 | 0 | 0 | 38 | 8 | 413 | 50 | 31 | 16 | 54 |
| 17 | 645 | 86 | 166 | 15 | 221 | 32 | 24 | 0 | 0 | 30 | 2 | 247 | 0 | 31 | 16 | 27 |
| 18 | 466 | 71 | 124 | 15 | 244 | 40 | 24 | 0 | 0 | 0 | 0 | 112 | 0 | 31 | 0 | 0 |
| 19 | 367 | 56 | 93 | 2 | 256 | 44 | 24 | 0 | 0 | 0 | 0 | 10 | 0 | 31 | 0 | 0 |
| Total | 13,830 | - | - | 144 | 1,399 | 144 | 116 | 1,820 | 1,008 | 1,690 | 2,191 | 4,120 | 400 | 214 | 152 | 432 |

Note: PIRLS/TIMSS combined surveys are included under PIRLS (school grade 4).

Table 2 shows the overall breakdown of available data sources by age. Far more data were available for the adolescent period, from about age 11 upwards, versus age 10 and below. Table 2 also shows

data sources by age—strikingly, almost all data for the under 8-year-old age group came from the MICS, which measures caregivers reports of physical and psychological aggression against their children. For 8 to 11 year olds, data comes almost exclusively from MICS, and PIRLS and TIMSS, which are school-based surveys measuring violence from students to other students. Almost no surveys which met our inclusion criteria measured violence from other perpetrators, or sexual violence, against children below 11 years. Most surveys which measure sexual violence concentrated on the adolescent period. Annex 7 shows the data sources by geographic region, and Annex 8 shows the number of available estimates by perpetrator and form of violence.

Prevalence of recent physical and emotional violence perpetrated by household members

Household members appear to be the most common perpetrators of physical and emotional violence against children, based on available data. However, caregiver and child reports differ radically in terms of prevalence, and hence are summarised separately. Very few caregiver-reported data are available for children above age 14 years and no data for those below 2 years old. All caregiver-reported data comes from MICS and DHS, and is over a past-month recall period. Based on caregiver's reports, for children aged 2 to 14 years, levels of past month emotional violence are higher than for physical violence (Figure 2). Levels of past month emotional violence remain relatively constant over age group, with about 60% to 70% of boys and girls experiencing emotional violence from a caregiver or other household member at age 2-14. Levels of past month physical violence are highest in younger age groups, with between 50 and 60% of girls and boys experiencing physical violence at age 2. Levels of past month physical violence appear to decline slowly as age increases, and at age 14, about 40 to 50% of boys and girls experience physical violence from a caregiver or household member. Levels of emotional violence however remain relatively constant over age, for both boys and girls.

<<Figure 2>>

There are relatively few studies which collect children's reports of physical and emotional violence perpetrated by caregivers (Annex 9) and also report age- and sex- specific prevalence. These few provide data on caregiver perpetrated violence for children aged 9 to 19 years. In general, the prevalence is far lower when compared to caregiver reports at each age. There is some suggestion from children's reports that the prevalence of past-year physical violence from caregivers may decline over age, similar to caregiver reports. Children's reports of emotional violence from caregivers are also rare, with only two studies reporting age and sex specific data on this for children aged 9 to 19 years. Estimates are far lower compared to caregiver reports, with fewer than 10% of 12 year olds reporting past-year emotional violence from caregivers, but nearly 40% of 19 year olds. There is some suggestion that prevalence of past year violence increases over age group (in contrast to parent reports, which remain more constant over age group). There were no data available on sexual abuse from parents/caregivers which met the inclusion criteria.

Prevalence of recent physical and emotional violence perpetrated by students

Students are the second most common perpetrator of physical and emotional violence against children at the population level, based on available data. Globally, between 70 and 80% of all boys and girls aged 8 to about 11 years, have experienced past-year emotional violence from a school student (Figure 3). For those ages 12-17, prevalence is about 50%, reflecting the fact that fewer children attend secondary school globally versus primary school. Restricting to school-going children only, the prevalence of emotional violence is relatively constant across age groups (Annex 10). Age and sex-specific data prior to age 6 are not available. Levels of past-year physical violence experienced by students are also high—from each age after age 8 to about age 11, about 40% of girls and 50% of boys experienced past-year physical violence from a student. In boys, from age 12, prevalence declines slightly over increasing age; for girls from age 12, prevalence remains more

constant. In girls, overall levels are lower in most age groups versus boys, which partly reflects that fewer girls attend school globally versus boys.

<<Figure 3>>

Prevalence of recent physical, emotional and sexual violence perpetrated by intimate or dating partners

Based on available data, intimate partners are the third most common perpetrator of violence against girls in childhood. However, very few estimates for boys of any age, or girls below the age of 15, are available (Figure 4). Data is available for girls aged 15-19, largely owing to inclusion of this age group in the DHS. Past-year physical and emotional violence by intimate or dating partners are reported by about 7% of all girls aged 15, to about 13% of all girls aged 19 years. Past year sexual violence from intimate and dating partners is reported by about 2% of all girls aged 15, but increases over age such that about 5% to 7% of girls aged 18 and 19 years report past year sexual victimisation.

<<Figure 4>>

Prevalence of recent physical violence by teachers, other authority figures and other adults

Very few studies provided age and sex-specific period prevalence estimates for physical violence perpetrated by teachers, police and other adults. Prevalence from these studies are displayed individually for each age in Figures 5 (girls) and 6 (boys). Data are available for children aged 9 to 18. Estimates of violence from teachers come mainly from one study conducted in Uganda, and estimates for authority figures come from the VAC Surveys in Kenya, Haiti, and Tanzania. Prevalence of physical violence from teachers is extremely high at each age, with more than 75% of 9 to 16 year olds reporting past year physical violence from a teacher in Uganda. Violence from authority figures was also common but varied by country, with 6 to 23% of Haitian children reporting this across age groups, but with 15% to nearly 60% of Tanzanian children reporting this across age groups. Only one study had data on emotional and sexual violence from teachers[17], so this data is not summarised here.

<<Figure 5>>

<<Figure 6>>

DISCUSSION

We have shown that there are large gaps in existing global data on the prevalence and perpetrators of different forms of violence against children of different ages. There is a severe lack of self-report data on any form of violence against children under about 11 years of age; on sexual violence across a range of ages, and on neglect. Age and sex specific data on witnessing intimate partner violence is also rare. We also know much more about violence perpetrated by students and family members, versus other types of perpetrators—there is little data available on teachers, other authority figures, strangers, siblings and other adults. In terms of global availability, more data is available from Europe than from other regions, with South East Asia being particularly under-represented. For both boys and girls, we have little idea of who the main perpetrators of sexual violence are, with the

exception of intimate partners for girls aged 15 to 19 years. Despite data gaps, where we are able to synthesise data, they show that children are most likely to experience physical and emotional violence from family members, followed by fellow students, and then intimate partners during adolescence. However, what little data exists on violence from teachers and other authority figures points to very high prevalence in some settings. Data also show variation by age, with emotional violence from both other students and caregivers remaining relatively constant over age, but physical violence from other students and caregivers declining over adolescence. Past-year prevalence of sexual violence from intimate partners appears to rise steadily with age across the adolescent period for girls. For boys, there is little age specific data available.

As seen with estimates of violence from caregivers/families, prevalence varies widely depending on whether caregivers are reporting or children are reporting. Perhaps contrary to expectation, caregiver reports, mainly from the MICS, yield higher prevalence estimates versus children's own reports (which tend to be from other surveys). The MICS data on emotional violence, as analysed here, include items measuring shouting, screaming and calling a child stupid or lazy (Annex 3), which may occur frequently but may not be viewed as particularly traumatic, which likely will increase disclosure by caregivers. Children may also be more likely to recall incidents which were severe or traumatic for them, thus biasing self-reported estimates downwards. Younger children also may have more trouble recalling events over a one year period versus older children, or parents. Further research is needed to understand the reasons for this difference and to understand which types of reports may be useful indicators for different purposes.

Strengths and Limitations

This is the first global review that has attempted to provide a more nuanced epidemiological breakdown of the prevalence of different forms of violence by age, sex and perpetrator. Whilst published data are available from specific studies presenting data across countries [13, 18-20], no global synthesis disaggregated by age is currently available. Our main limitation relates to data presentation of the underlying studies which we have included in the review—if published studies did not present data in an age and sex-specific fashion, we were unable to include them. However, what we have synthesized represents the evidence from published data and large international datasets, and therefore the knowledge base available to those developing age-appropriate violence prevention programs and allocating funding. We were also unable to access one dataset which would have met the inclusion criteria (BECAN), and there may be others which our systematic search efforts did not pick up. We produced global average prevalence estimates—where there were enough data, we modelled these using meta-regression techniques and adjusted for differences in definitions of forms of violence and study quality characteristics. Although every effort was made to adjust for differences in measurement of violence across studies there may be residual confounding related to both definitions of violence and study quality variables which may in part explain age, sex and regional differences in prevalence estimates. As with all studies on violence, there is likely to be under-reporting of certain forms of violence, particularly sexual violence, due to the stigma associated with victimisation and potential fear of reprisals. Our estimates are also based on population-based household and school-based surveys, which will include far fewer children who live outside of family care, on the street, or in institutions, and may under-represent experiences of those in conflict settings. In some cases, similar to other global estimates, data from only a limited number of countries is currently available. Once more countries conduct prevalence studies, these estimates will change.

Implications for future research, policy and programming

There is a clear need for more data on the experiences of younger children, particularly around family and sexual violence. For very young children it is likely that we must always rely on proxy reports; however for children of later primary school age, it may be possible to develop and test survey measures that allow them to directly report on their own experiences. Some school-based surveys do include questions on peer violence for fourth graders (about 9 years old). Efforts need to be made to develop methods to reliably ask about other forms of violence. Further data is also needed on perpetrators besides students and peers, intimate partners, and household members. This is particularly true for sexual violence, where we have little understanding of who perpetrators may be. Questions on violence from teachers and authority figures are included in some surveys, but this is generally not collected on a widespread basis—yet prevalence data show alarming figures in the WHO African region. Comparability of existing surveys is limited, with a range of different questions being used to capture overlapping exposures to different forms of violence. Some of the larger surveys with good international coverage ask only two or three questions; conversely, more specialised violence surveys have been conducted in a much smaller number of countries. While each survey provides valuable information, conversations about standardisation of measures would be useful to support monitoring in countries, including related to the SDGs. Similarly, our data synthesis clearly shows that experiences of violence in childhood are nearly universal. While all violence can be conceptualised as a violation of rights, a more nuanced understanding of what constitutes risky exposures from a public health perspective would be valuable for directing scarce prevention resources. Programmatically, the home setting is of obvious importance. Both the US Centers for Disease Control and the WHO, along with 8 other key global partner organizations, have recently issued INSPIRE[21], guidance on effective programming to reduce violence against children, including in the home setting. There is a relatively robust evidence base around parenting and family strengthening programs, however the vast majority of evaluations have taken place in high income countries. Work is currently underway to test efficacy of a number of parenting programs in lower income countries (eg.[22]).

There is also a clear need to target school environments—if a child is attending school, they are likely to experience more violence in this environment than in the home. In many settings, first intimate partnerships will begin while one or the other partner is attending school, which also can provide an intervention opportunity to reduce sexual violence. INSPIRE contains recommendations for school programs, although it is notable that most of these programs focus on and have been tested for efficacy in relation to peer violence and bullying, rather than violence from staff to students or violence in intimate relationships. Only a handful of programs have been tested to reduce violence from school staff towards students[23-25], and recent reviews of dating violence prevention interventions suggest that many of these programs have limited evidence of efficacy[26, 27]. The inclusion of violence in childhood in the SDGs is welcome in the violence prevention and child health communities. Our results suggest that new, standardised data collection from a broader range of ages, which includes both sexes, is needed, along with a discussion about the ethical aspects of gathering such data from children and adolescents. At present, it will be difficult to monitor whether violence reductions happen equitably across all age groups of children, and across different areas of the world, as there are relatively few data sources that can present this information in a disaggregated way.

Conclusions

There are large gaps in current understandings of the epidemiology of violence against children. Improved data collection is needed to better inform policy and programming, and to meet SDG targets. Programmes to prevent violence within households are needed at scale, and increased focus on schools as a prevention site is urgently needed.

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Figures

Figure 1. Flow chart describing data inclusion

Figure 2: Prevalence of recent physical and emotional violence perpetrated by household members

Legend: Data sources: Multiple Indicator Cluster Surveys (MICS), Demographic and Health Surveys (DHS). Model shows caregivers reports of physical aggression by household members. Definitions are provided in Annex 3 and exact prevalence numbers are in Annex 5. To read bar graph: age of the child is on the y-axis; prevalence of each form of violence is on the x axis. Prevalence corresponds to the distance of the bar along the x-axis for boys (to the left), and girls (to the right). Forms of violence are overlaid; and the black bars are a 95% confidence interval. For example, for girls aged 2 years, the prevalence of physical violence is 56% (95%CI 49-63%), and the prevalence of emotional violence is 60% (95%CI 52-68%).

Figure 3: Prevalence of physical and emotional violence perpetrated by students against boys and girls in the past 12 months

Legend: Data sources: GSHS, HBSC, PIRLS, TIMSS and systematic review publications. Model shows children’s self-reported exposure. Definitions are provided in Annex 3 and exact prevalence number are in Annex 5. Pooled prevalence estimates at ages 6, 7 and 19 years are from unadjusted meta-analyses, all others are adjusted meta-regression estimates. To read bar graph: age of the child is on the y-axis; prevalence of each form of violence is on the x axis. Prevalence corresponds to the distance of the bar along the x-axis for boys (to the left), and girls (to the right). Forms of violence are overlaid; and the black bars are a 95% confidence interval. For example, for boys aged 8 years, the prevalence of physical violence is 54% (95%CI: 43-65) and the prevalence of emotional violence is 74% (95%CI 63-84%).

Figure 4: Prevalence of physical, emotional and sexual violence perpetrated by intimate or dating partners against boys and girls in the past 12 months

Legend: Data sources: Demographic and Health Surveys (DHS), World Health Organization Multi-Country Study on Women’s Health and Domestic Violence against Women (WHO VAW), Reproductive Health Surveys (RHS), Good Schools Study (GSS) and Violence against Children Surveys

(VACS, for physical violence only) and systematic review publications. Model shows children's self-reported exposure. Definitions are in Annex 3 and exact prevalence number are in Annex 5. Pooled prevalence estimates at ages 10, 11, 13 and 14 years are from unadjusted meta-analyses all others are adjusted meta-regression estimates. To read bar graph: age of the child is on the y-axis; prevalence of each form of violence is on the x axis. Prevalence corresponds to the distance of the bar along the x-axis for boys (to the left), and girls (to the right). Forms of violence are overlaid; and the black bars are a 95% confidence interval. For example, for girls aged 19 years, the prevalence of sexual violence is 5.2% (95%CI 3.3-7.0%); the prevalence of physical violence is 12.6% (95%CI 10.1-15.0%); and the prevalence of emotional violence is 13.24% (95%CI 10.01-16.47%).

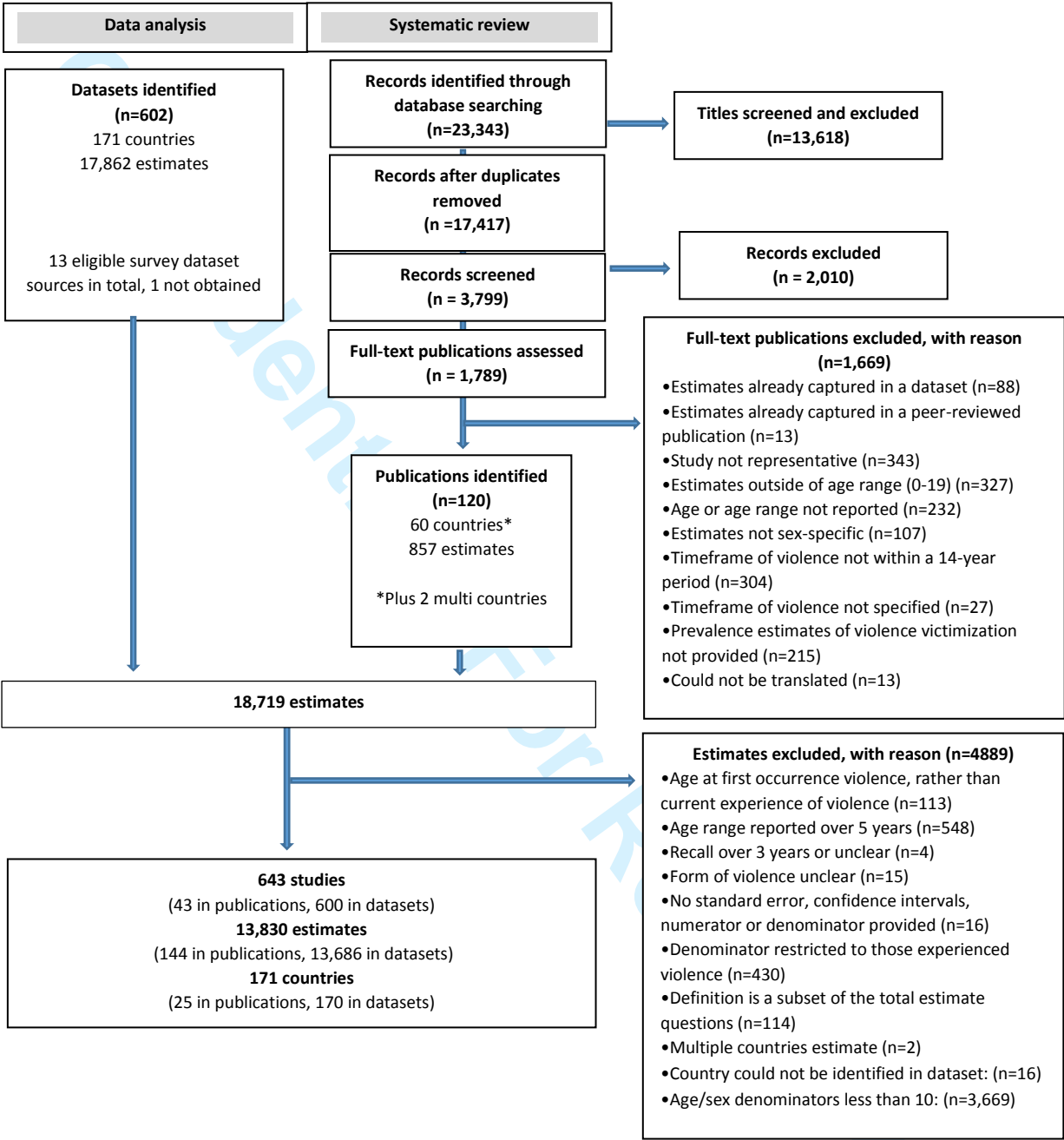
Figure 5. Prevalence of physical violence perpetrated by teachers, other authority figures and other adults against girls in the past 12 months

Legend: Estimates are children's self-reported exposure. Definitions are in Annex 3. To read the forest plot: for each year of age, perpetrator, datasource and country are described along the y-axis. Along the x-axis, prevalence estimates from each are represented by a dot, with a bar drawn through to represent the 95% confidence interval.

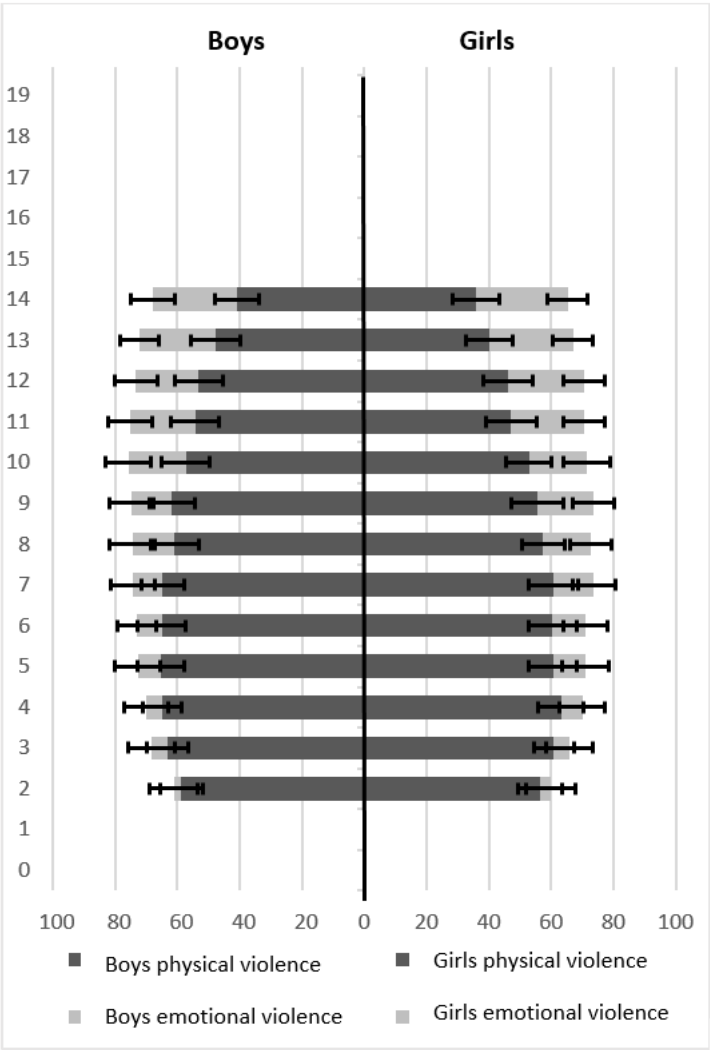
Figure 6. Prevalence of recent physical violence perpetrated by teachers, other authority figures and other adults against boys in the past 12 months

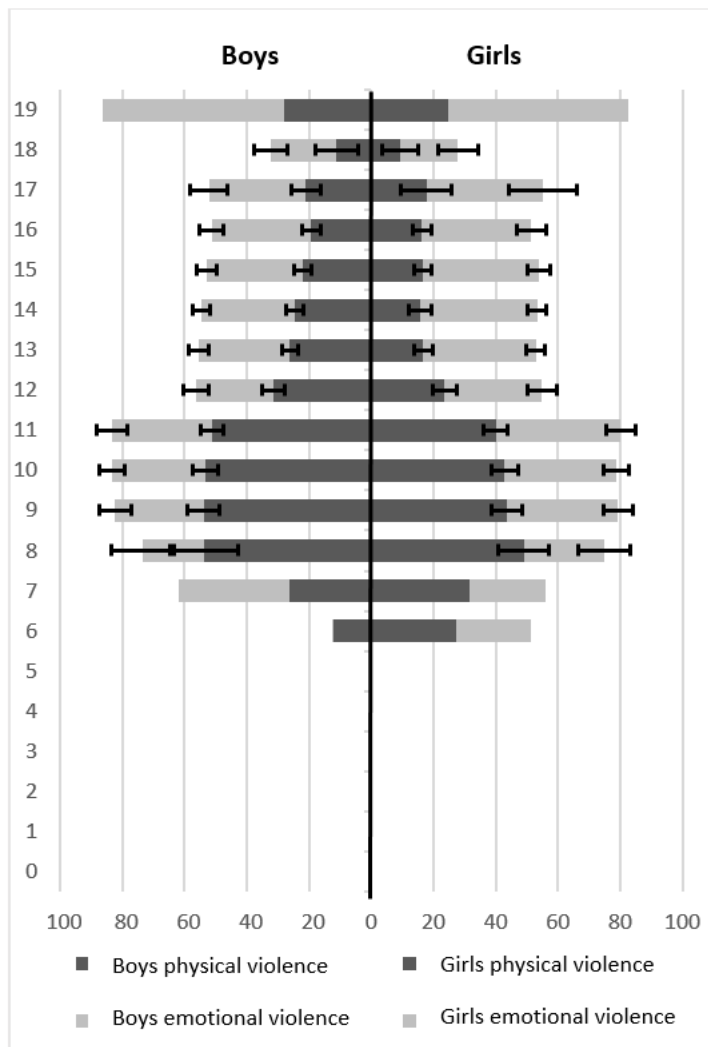
Estimates are children's self-reported exposure. Definitions are in Annex 3. To read the forest plot: for each year of age, perpetrator, data source and country are described along the y-axis. Along the x-axis, prevalence estimates from each are represented by a dot, with a bar drawn through to represent the 95% confidence interval.

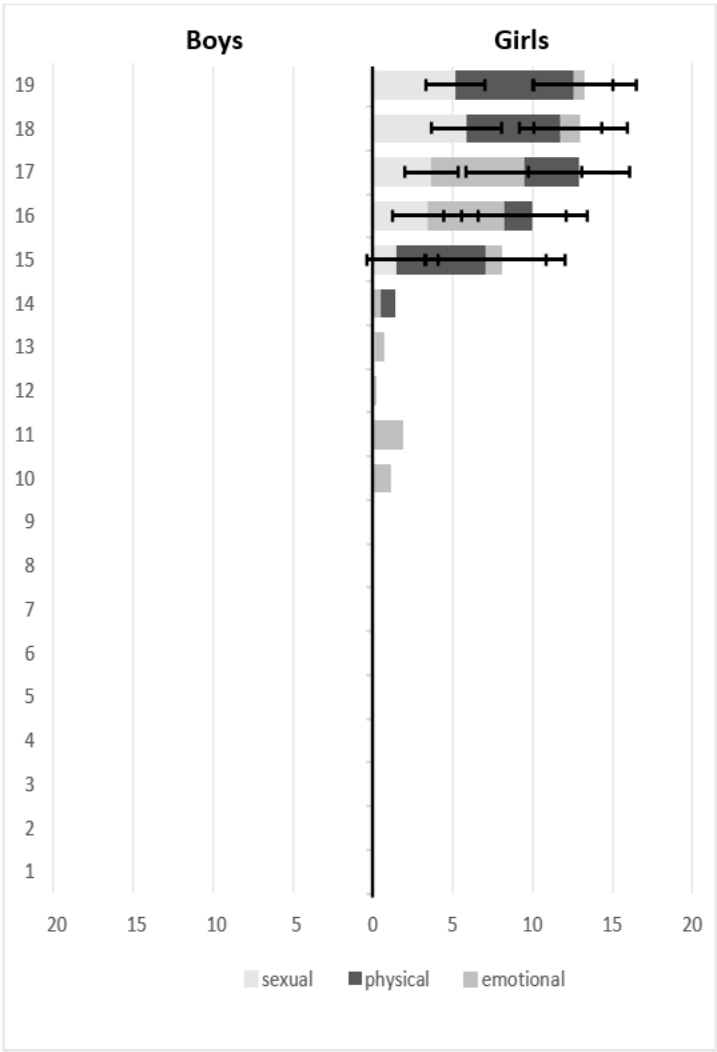
Figure 1. Flow chart describing data inclusion

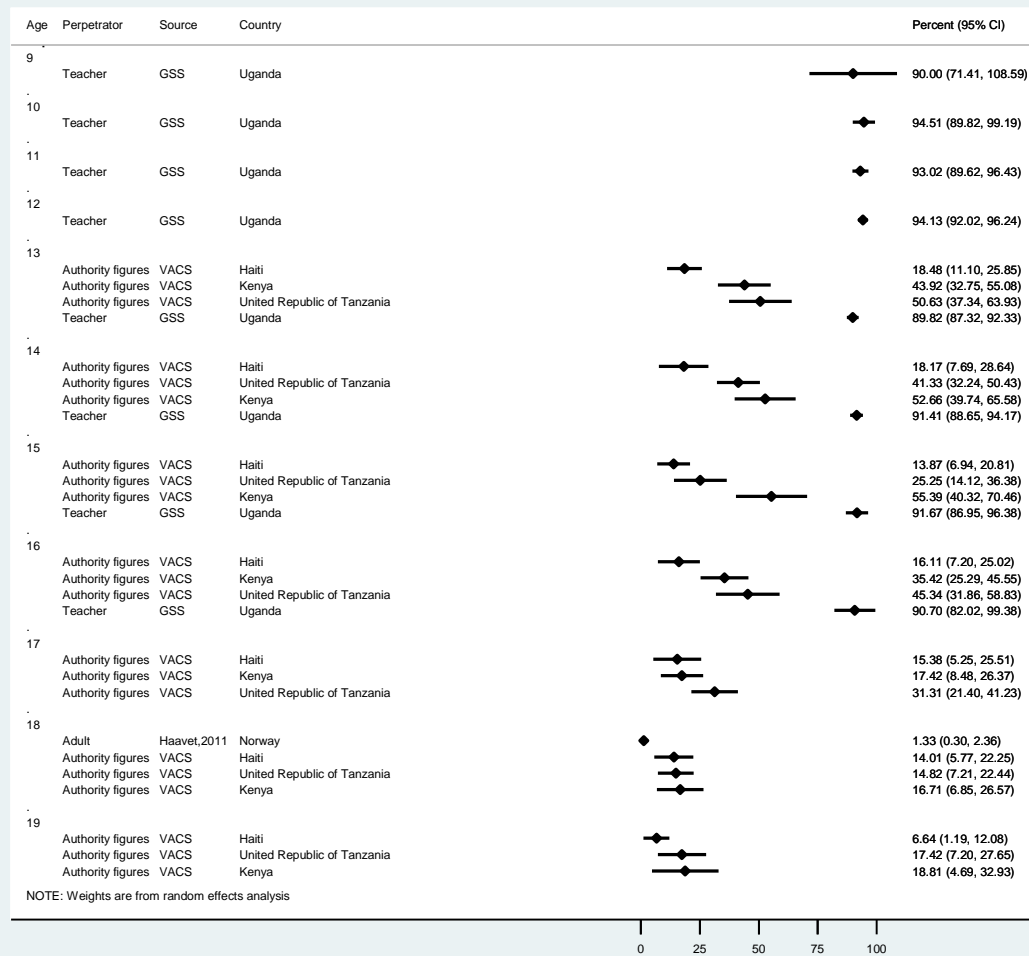


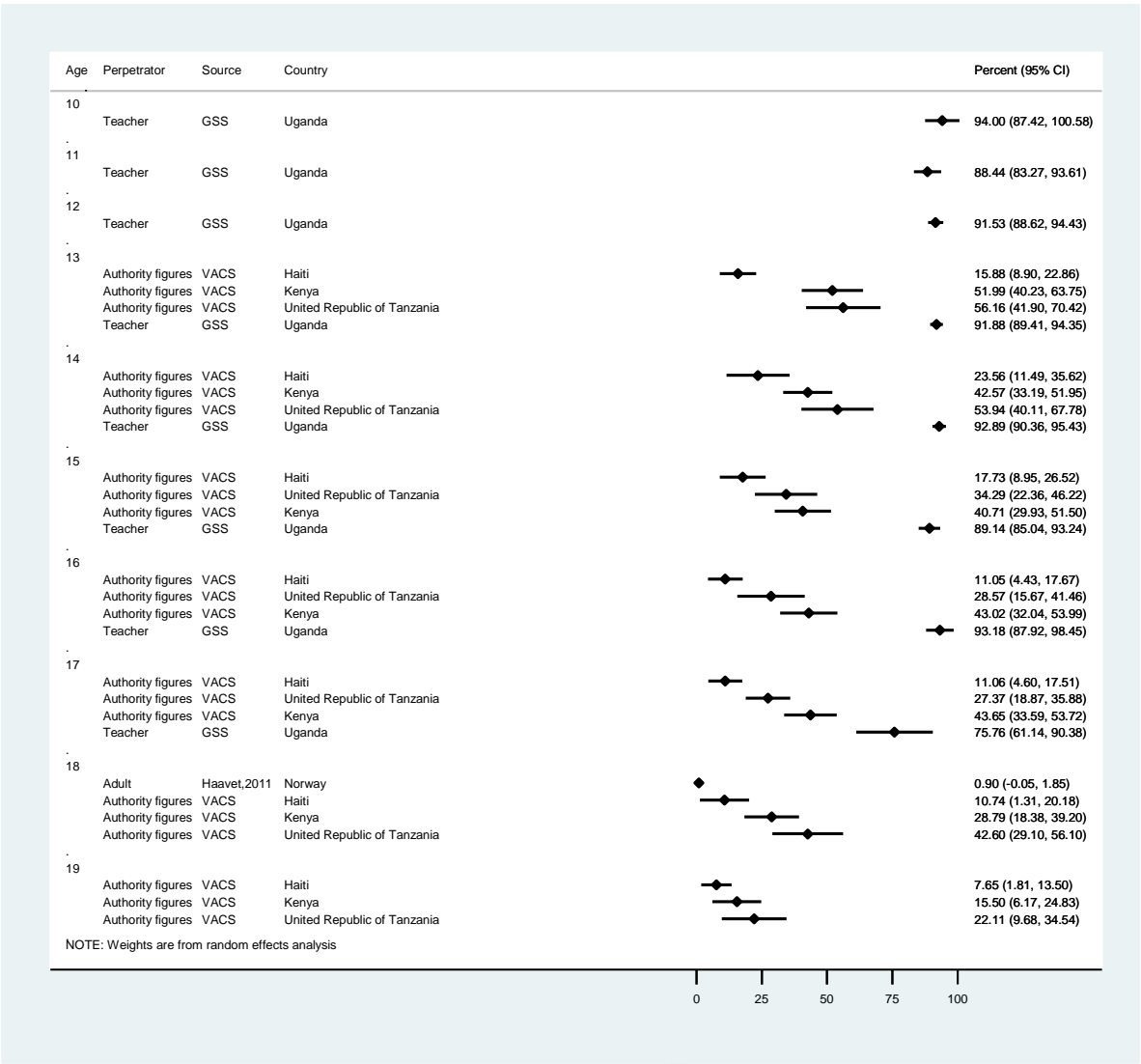
Confidential: For Review Only











Annex 1. Search strategy and databases searched

1.0 Ovid Medline: Searched on 7 December, 2015

1. Child Abuse/ OR Child Abuse, Sexual/
2. Child/ OR Adolescent/ OR Young Adult/ OR Infant/ OR Infant, Newborn/ OR Students/ OR Child, Preschool/
3. (child* OR adolescen* OR boy\$1 OR boyhood OR girl* OR teen* OR preteen* OR pubescen* OR prepubescen* OR youth* OR juvenile* OR preteen* OR pre teen* OR young people* OR young person* OR early adult* OR young adult* OR infan* OR baby OR babies OR school* OR pupil* OR student* OR nursery OR preschool* OR pre school* OR partner* or spouse* or peer* OR boyfriend* or boy friend* or girlfriend* or girl friend or acquaintance* or non stranger* or nonstranger*).ti,ab,kw.
4. 2 OR 3
5. Rape/ OR Sex Offenses/ OR Incest/ OR Violence/ OR Domestic Violence/ OR Partner Violence/ OR Spouse Abuse/ OR Battered Women/ OR Aggression/ OR Punishment/ OR Bullying/
6. (rape\$1 OR rapist OR incest OR polyvictim* OR poly victim* OR pedophil* OR paedophil* OR corporal punish* OR bully OR bullies OR anti bully* OR bully victim* OR cyberbull* OR cybervictim* OR neglect*).ti,ab,kw.
7. sex* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR re victim* OR offence* OR offense* OR molest* OR harass* OR exploit*).ti,ab,kw.
8. phys* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,ab,kw.
9. (emotion* OR psychologic* OR mental) adj2 (violen* OR abus* OR maltreat*).ti,ab,kw.
10. (gender or peer) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR harass*).ti,ab,kw.
11. (intimate partner OR domestic partner OR partner* OR relationship* OR spouse* OR boyfriend* OR boy friend* OR girlfriend* OR girl friend OR date OR dating OR acquaintance* OR non stranger* OR nonstranger*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,ab,kw.
12. (witness* OR expos*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR harass*).ti,ab,kw.
13. 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12
14. 4 AND 13
15. 1 OR 14
16. Prevalence/ OR Incidence/ OR Cross-sectional studies/ OR Observational study/ OR exp Cohort studies/
17. (cross sectional OR observational OR prevalence OR incidence OR transversal OR retrospective OR longitudinal OR survey* OR cohort OR follow up OR followup).ti,ab,kw.
18. 16 OR 17
19. 15 AND 18
20. exp Africa/ OR exp Americas/ OR exp Asia/ OR exp Australia/ OR exp Europe/ OR exp Islands/ OR exp Oceania/
21. (Afghanistan OR Albania OR Algeria OR Africa OR American Samoa OR Andorra OR Angola OR Anguilla OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Australia OR Austria OR Azerbaijan OR Bahamas OR Bahrain OR Bangladesh OR Barbados OR Belarus OR Belgium OR Belize OR Benin OR Bermuda OR Bhutan OR Bolivia OR Bosnia OR Botswana OR Bougainville OR Brazil OR British Indian Ocean OR British Virgin Islands OR Brunei OR Bulgaria OR Burkina Faso OR Burundi OR Cambodia OR Cameroon OR Canada OR Cape Verde Islands OR Cayman Islands OR Central African Republic OR Chad OR Central America OR Chile OR China OR Macau OR Taiwan OR Colombia OR Comoros OR Congo OR Cook Islands OR Costa Rica OR Ivory Coast OR Croatia OR Cuba OR Cyprus OR Czech Republic OR Denmark OR Djibouti OR Dominica OR Dominican Republic OR Ecuador OR England OR Egypt OR El Salvador OR Equatorial Guinea OR Eritrea OR Estonia OR Ethiopia OR Europe OR Faeroe Islands OR Falkland Islands OR Federated States of Micronesia OR Fiji OR Finland OR France OR French Guiana OR French Polynesia OR Gabon OR Gambia OR Georgia OR Germany OR Ghana OR Gibraltar OR Greece OR Greenland OR Grenada OR Guadeloupe OR Guam OR Guatemala OR Guinea OR Guinea-Bissau OR Guyana OR Haiti OR Holy See OR Honduras OR Hungary OR Iceland OR India OR Indonesia OR Iran OR Iraq OR Ireland OR Israel OR Italy OR Jamaica OR Japan OR Jordan OR Kazakhstan OR Kenya OR Kiribati OR Korea OR Kosovo OR Kuwait OR Kyrgyzstan OR Laos OR Latvia OR Lebanon OR Lesotho OR Liberia OR Libya OR Liechtenstein OR Lithuania OR Luxembourg OR Macedonia OR Madagascar

OR Malawi OR Malaysia OR Maldives OR Mali OR Malta OR Martinique OR Mauritania OR Mauritius OR Mayotte OR Mexico OR Moldova OR Monaco OR Mongolia OR Montenegro OR Montserrat OR Morocco OR Mozambique OR Myanmar OR Namibia OR Nauru OR Nepal OR Netherlands OR Netherlands Antilles OR New Caledonia OR New Zealand OR Nicaragua OR Niger OR Nigeria OR Norway OR Oman OR Pakistan OR Palestine OR Panama OR Papua New Guinea OR Paraguay OR Peru OR Philippines OR Poland OR Portugal OR Puerto Rico OR Qatar OR Romania OR Russia OR Rwanda OR Saint Barthelemy OR Saint Helena OR Saint Kitts OR Saint Lucia OR Saint Martin OR Saint Pierre OR Saint Vincent OR Samoa OR San Marino OR Sao Tome OR Saudi Arabia OR Scotland OR Senegal OR Serbia OR Seychelles OR Sierra Leone OR Singapore OR Slovakia OR Slovenia OR Solomon Islands OR Somalia OR South Africa OR Spain OR Sri Lanka OR Sudan OR Suriname OR Swaziland OR Sweden OR Switzerland OR Syria OR Tajikistan OR Tanzania OR Thailand OR Timor Leste OR Togo OR Tokelau Islands OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turks OR Caicos OR Tuvalu OR Uganda OR Ukraine OR United Arab Emirates OR United Kingdom OR United States OR Uruguay OR Virgin Islands OR Uzbekistan OR Vanuatu OR Venezuela OR Vietnam OR Futuna OR Wales OR Yemen OR Zambia OR Zimbabwe OR Reunion OR Sao Tome OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR New Hampshire OR New Jersey OR New Mexico OR New York OR North Carolina OR North Dakota OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR Rhode Island OR South Carolina OR South Dakota OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR West Virginia OR Wisconsin OR Wyoming).hw,ti,ab,kw.

22. 20 OR 21

23. 19 and 22

24. (comment OR letter OR editorial OR conference abstract OR news OR newspaper article OR patient education handout OR case report).pt.

25. 23 NOT 24

26. systematic review.ti.

27. 25 NOT 26

28. exp animals/ not humans.sh.

29. 27 NOT 28

1.2 Ovid Embase: Searched on 7 December, 2015

1. exp Child Abuse/

2. Child/ OR Adolescent/ OR Young Adult/ OR Infant/ OR Newborn/ OR exp Student/ OR Preschool children/

3. (child* OR adolescen* OR boy\$1 OR boyhood OR girl* OR teen* OR preteen* OR pubescen* OR prepubescen* OR youth* OR juvenile* OR preteen* OR pre teen* OR young people* OR young person* OR early adult* OR young adult* OR infan* OR baby OR babies OR school* OR pupil* OR student* OR nursery OR preschool* OR pre school* OR partner* or spouse* or peer* OR boyfriend* or boy friend* or girlfriend* or girl friend or acquaintance* or non stranger* or nonstranger*).ti,kw.

4. 2 OR 3

5. exp Sexual assault/ OR Sexual crime/ OR Incest/ OR exp Violence/ OR Aggression/ OR Aggressiveness/ OR Bullying/ OR Hostility/

6. (rape\$1 OR rapist OR incest OR polyvictim* OR poly victim* OR pedophil* OR paedophil* OR corporal punish* OR bully OR bullies OR anti bully* OR bully victim* OR cyberbull* OR cybervictim* OR neglect*).ti,kw.

7. sex* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR re victim* OR offence* OR offense* OR molest* OR harass* OR exploit*).ti,kw.

8. phys* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,kw.

9. (emotion* OR psychologic* OR mental) adj2 (violen* OR abus* OR maltreat*).ti,kw.

10. (gender or peer) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR harass*).ti,kw.

11. (intimate partner OR domestic partner OR partner* OR relationship* OR spouse* OR boyfriend* OR boy friend* OR girlfriend* OR girl friend OR date OR dating OR acquaintance* OR non stranger* OR nonstranger*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,kw.

12. (witness* OR expos*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR harass*).ti,kw.
13. 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12
14. 4 AND 13
15. 1 OR 14
16. Cross-sectional study/ OR Prevalence/ OR Health Survey/ OR Observational Study/ OR Cohort Analysis/ OR Longitudinal Study/ OR Retrospective Study/
17. (cross sectional OR observational OR prevalence OR incidence OR transversal OR retrospective OR longitudinal OR survey* OR cohort OR follow up OR followup).ti,kw.
18. 16 OR 17
19. 15 AND 18
20. exp Eastern Hemisphere/ OR exp Western Hemisphere/ OR exp Pacific Islands/
21. (Afghanistan OR Albania OR Algeria OR Africa OR American Samoa OR Andorra OR Angola OR Anguilla OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Australia OR Austria OR Azerbaijan OR Bahamas OR Bahrain OR Bangladesh OR Barbados OR Belarus OR Belgium OR Belize OR Benin OR Bermuda OR Bhutan OR Bolivia OR Bosnia OR Botswana OR Bougainville OR Brazil OR British Indian Ocean OR British Virgin Islands OR Brunei OR Bulgaria OR Burkina Faso OR Burundi OR Cambodia OR Cameroon OR Canada OR Cape Verde Islands OR Cayman Islands OR Central African Republic OR Chad OR Central America OR Chile OR China OR Macau OR Taiwan OR Colombia OR Comoros OR Congo OR Cook Islands OR Costa Rica OR Ivory Coast OR Croatia OR Cuba OR Cyprus OR Czech Republic OR Denmark OR Djibouti OR Dominica OR Dominican Republic OR Ecuador OR England OR Egypt OR El Salvador OR Equatorial Guinea OR Eritrea OR Estonia OR Ethiopia OR Europe OR Faeroe Islands OR Falkland Islands OR Federated States of Micronesia OR Fiji OR Finland OR France OR French Guiana OR French Polynesia OR Gabon OR Gambia OR Georgia OR Germany OR Ghana OR Gibraltar OR Greece OR Greenland OR Grenada OR Guadeloupe OR Guam OR Guatemala OR Guinea OR Guinea-Bissau OR Guyana OR Haiti OR Holy See OR Honduras OR Hungary OR Iceland OR India OR Indonesia OR Iran OR Iraq OR Ireland OR Israel OR Italy OR Jamaica OR Japan OR Jordan OR Kazakhstan OR Kenya OR Kiribati OR Korea OR Kosovo OR Kuwait OR Kyrgyzstan OR Laos OR Latvia OR Lebanon OR Lesotho OR Liberia OR Libya OR Liechtenstein OR Lithuania OR Luxembourg OR Macedonia OR Madagascar OR Malawi OR Malaysia OR Maldives OR Mali OR Malta OR Martinique OR Mauritania OR Mauritius OR Mayotte OR Mexico OR Moldova OR Monaco OR Mongolia OR Montenegro OR Montserrat OR Morocco OR Mozambique OR Myanmar OR Namibia OR Nauru OR Nepal OR Netherlands OR Netherlands Antilles OR New Caledonia OR New Zealand OR Nicaragua OR Niger OR Nigeria OR Norway OR Oman OR Pakistan OR Palestine OR Panama OR Papua New Guinea OR Paraguay OR Peru OR Philippines OR Poland OR Portugal OR Puerto Rico OR Qatar OR Romania OR Russia OR Rwanda OR Saint Barthelemy OR Saint Helena OR Saint Kitts OR Saint Lucia OR Saint Martin OR Saint Pierre OR Saint Vincent OR Samoa OR San Marino OR Sao Tome OR Saudi Arabia OR Scotland OR Senegal OR Serbia OR Seychelles OR Sierra Leone OR Singapore OR Slovakia OR Slovenia OR Solomon Islands OR Somalia OR South Africa OR Spain OR Sri Lanka OR Sudan OR Suriname OR Swaziland OR Sweden OR Switzerland OR Syria OR Tajikistan OR Tanzania OR Thailand OR Timor Leste OR Togo OR Tokelau Islands OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turks OR Caicos OR Tuvalu OR Uganda OR Ukraine OR United Arab Emirates OR United Kingdom OR United States OR Uruguay OR Virgin Islands OR Uzbekistan OR Vanuatu OR Venezuela OR Vietnam OR Futuna OR Wales OR Yemen OR Zambia OR Zimbabwe OR Reunion OR Sao Tome OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR New Hampshire OR New Jersey OR New Mexico OR New York OR North Carolina OR North Dakota OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR Rhode Island OR South Carolina OR South Dakota OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR West Virginia OR Wisconsin OR Wyoming).hw,ti,kw.
22. 20 OR 21
23. 19 and 22
24. (letter OR editorial OR conference abstract OR report).pt.
25. 23 NOT 24
26. systematic review.ti.
27. 25 NOT 26
28. exp animal/ not human.sh.

29. 27 NOT 28

1.3 PsychInfo: Searched on 7 December, 2015

- 1.exp Child Abuse/ OR Child Neglect/ OR Child Sexual Abuse/
- 2. exp Students/
- 3. (child* OR adolescen* OR boy\$1 OR boyhood OR girl* OR teen* OR preteen* OR pubescen* OR prepubescen* OR youth* OR juvenile* OR preteen* OR pre teen* OR young people* OR young person* OR early adult* OR young adult* OR infan* OR baby OR babies OR school* OR pupil* OR student* OR nursery OR preschool* OR pre school* OR partner* or spouse* or peer* OR boyfriend* or boy friend* or girlfriend* or girl friend or acquaintance* or non stranger* or nonstranger*).ti,id.
- 4. 2 OR 3
- 5. exp Rape/ OR exp Sexual abuse/ OR Domestic Violence/ OR exp Partner Abuse/ OR Physical Abuse/ OR Sex offenses/ OR Verbal Abuse/ OR School Violence/ OR Violent Crime/ OR Exposure to Violence/ OR Family Crime/ OR exp Incest/ OR exp Bullying/ OR exp Aggressive Behavior/ OR Punishment/
- 6. (rape\$1 OR rapist OR incest OR polyvictim* OR poly victim* OR pedophil* OR paedophil* OR corporal punish* OR bully OR bullies OR anti bully* OR bully victim* OR cyberbull* OR cybervictim* OR neglect*).ti,id.
- 7. sex* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR re victim* OR offence* OR offense* OR molest* OR harass* OR exploit*).ti,id.
- 8. phys* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,id.
- 9. (emotion* OR psychologic* OR mental) adj2 (violen* OR abus* OR maltreat*).ti,id.
- 10. (gender or peer) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR harass*).ti,id.
- 11. (intimate partner OR domestic partner OR partner* OR relationship* OR spouse* OR boyfriend* OR boy friend* OR girlfriend* OR girl friend OR date OR dating OR acquaintance* OR non stranger* OR nonstranger*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,id.
- 12. (witness* OR expos*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR harass*).ti,id.
- 13. 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12
- 14. Limit 13 to (100 childhood OR 120 neonatal OR 140 Infancy <2 to 23 mo> OR 160 preschool age OR 180 school age OR 200 adolescence OR 320 Young adulthood)
- 15. 4 AND 14
- 16. 1 OR 15
- 17. Surveys/ OR Cohort analysis/ OR Longitudinal studies/
- 18. (cross sectional OR observational OR prevalence OR incidence OR transversal OR retrospective OR longitudinal OR survey* OR cohort OR follow up OR followup).ti,id.
- 19. 17 OR 18
- 20. 16 AND 19
- 21. exp Countries/
- 22. (Afghanistan OR Albania OR Algeria OR Africa OR American Samoa OR Andorra OR Angola OR Anguilla OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Australia OR Austria OR Azerbaijan OR Bahamas OR Bahrain OR Bangladesh OR Barbados OR Belarus OR Belgium OR Belize OR Benin OR Bermuda OR Bhutan OR Bolivia OR Bosnia OR Botswana OR Bougainville OR Brazil OR British Indian Ocean OR British Virgin Islands OR Brunei OR Bulgaria OR Burkina Faso OR Burundi OR Cambodia OR Cameroon OR Canada OR Cape Verde Islands OR Cayman Islands OR Central African Republic OR Chad OR Central America OR Chile OR China OR Macau OR Taiwan OR Colombia OR Comoros OR Congo OR Cook Islands OR Costa Rica OR Ivory Coast OR Croatia OR Cuba OR Cyprus OR Czech Republic OR Denmark OR Djibouti OR Dominica OR Dominican Republic OR Ecuador OR England OR Egypt OR El Salvador OR Equatorial Guinea OR Eritrea OR Estonia OR Ethiopia OR Europe OR Faeroe Islands OR Falkland Islands OR Federated States of Micronesia OR Fiji OR Finland OR France OR French Guiana OR French Polynesia OR Gabon OR Gambia OR Georgia OR Germany OR Ghana OR Gibraltar OR Greece OR Greenland OR Grenada OR Guadeloupe OR Guam OR Guatemala OR Guinea OR Guinea-Bissau OR Guyana OR Haiti OR Holy See OR Honduras OR Hungary OR Iceland OR India OR Indonesia OR Iran OR Iraq OR Ireland OR Israel OR Italy OR Jamaica OR Japan OR Jordan OR Kazakhstan OR Kenya OR Kiribati OR Korea OR Kosovo OR Kuwait OR Kyrgyzstan OR Laos OR Latvia OR Lebanon OR Lesotho OR

Liberia OR Libya OR Liechtenstein OR Lithuania OR Luxembourg OR Macedonia OR Madagascar OR Malawi OR Malaysia OR Maldives OR Mali OR Malta OR Martinique OR Mauritania OR Mauritius OR Mayotte OR Mexico OR Moldova OR Monaco OR Mongolia OR Montenegro OR Montserrat OR Morocco OR Mozambique OR Myanmar OR Namibia OR Nauru OR Nepal OR Netherlands OR Netherlands Antilles OR New Caledonia OR New Zealand OR Nicaragua OR Niger OR Nigeria OR Norway OR Oman OR Pakistan OR Palestine OR Panama OR Papua New Guinea OR Paraguay OR Peru OR Philippines OR Poland OR Portugal OR Puerto Rico OR Qatar OR Romania OR Russia OR Rwanda OR Saint Barthelemy OR Saint Helena OR Saint Kitts OR Saint Lucia OR Saint Martin OR Saint Pierre OR Saint Vincent OR Samoa OR San Marino OR Sao Tome OR Saudi Arabia OR Scotland OR Senegal OR Serbia OR Seychelles OR Sierra Leone OR Singapore OR Slovakia OR Slovenia OR Solomon Islands OR Somalia OR South Africa OR Spain OR Sri Lanka OR Sudan OR Suriname OR Swaziland OR Sweden OR Switzerland OR Syria OR Tajikistan OR Tanzania OR Thailand OR Timor Leste OR Togo OR Tokelau Islands OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turks OR Caicos OR Tuvalu OR Uganda OR Ukraine OR United Arab Emirates OR United Kingdom OR United States OR Uruguay OR Virgin Islands OR Uzbekistan OR Vanuatu OR Venezuela OR Vietnam OR Futuna OR Wales OR Yemen OR Zambia OR Zimbabwe OR Reunion OR Sao Tome OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR New Hampshire OR New Jersey OR New Mexico OR New York OR North Carolina OR North Dakota OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR Rhode Island OR South Carolina OR South Dakota OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR West Virginia OR Wisconsin OR Wyoming).hw,id,ti.

23. 21 OR 22

24. 20 and 23

25. limit 24 to (chapter OR column/opinion OR comment/reply OR editorial OR letter)

26. 24 NOT 25

27. systematic review.ti.

28. 26 NOT 27

29. exp animals/ NOT humans.sh.

30. 28 NOT 29

1.4 Global Health: Searched on 7 December, 2015

1. exp Child Abuse/ OR Child Neglect/

2. exp Children/ OR Adolescents/ OR Young Adults/ OR exp Infants/ OR exp Students/

3. (child* OR adolescen* OR boy\$1 OR boyhood OR girl* OR teen* OR preteen* OR pubescen* OR prepubescen* OR youth* OR juvenile* OR preteen* OR pre teen* OR young people* OR young person* OR early adult* OR young adult* OR infan* OR baby OR babies OR school* OR pupil* OR student* OR nursery OR preschool* OR pre school* OR partner* or spouse* or peer* OR boyfriend* or boy friend* or girlfriend* or girl friend or acquaintance* or non stranger* or nonstranger*).ti,id.

4. 2 OR 3

5. Sexual Assault/ OR Sexual Abuse/ OR Aggressive Behavior/ OR Domestic Violence/ OR Spouse Abuse/ OR Aggression/ OR Punishment/

6. (rape\$1 OR rapist OR incest OR polyvictim* OR poly victim* OR pedophil* OR paedophil* OR corporal punish* OR bully OR bullies OR anti bully* OR bully victim* OR cyberbull* OR cybervictim* OR neglect*).ti,id.

7. sex* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR re victim* OR offence* OR offense* OR molest* OR harass* OR exploit*).ti,id.

8. phys* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,id.

9. (emotion* OR psychologic* OR mental) adj2 (violen* OR abus* OR maltreat*).ti,id.

10. (gender or peer) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR harass*).ti,id.

11. (intimate partner OR domestic partner OR partner* OR relationship* OR spouse* OR boyfriend* OR boy friend* OR girlfriend* OR girl friend OR date OR dating OR acquaintance* OR non stranger* OR nonstranger*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,id.

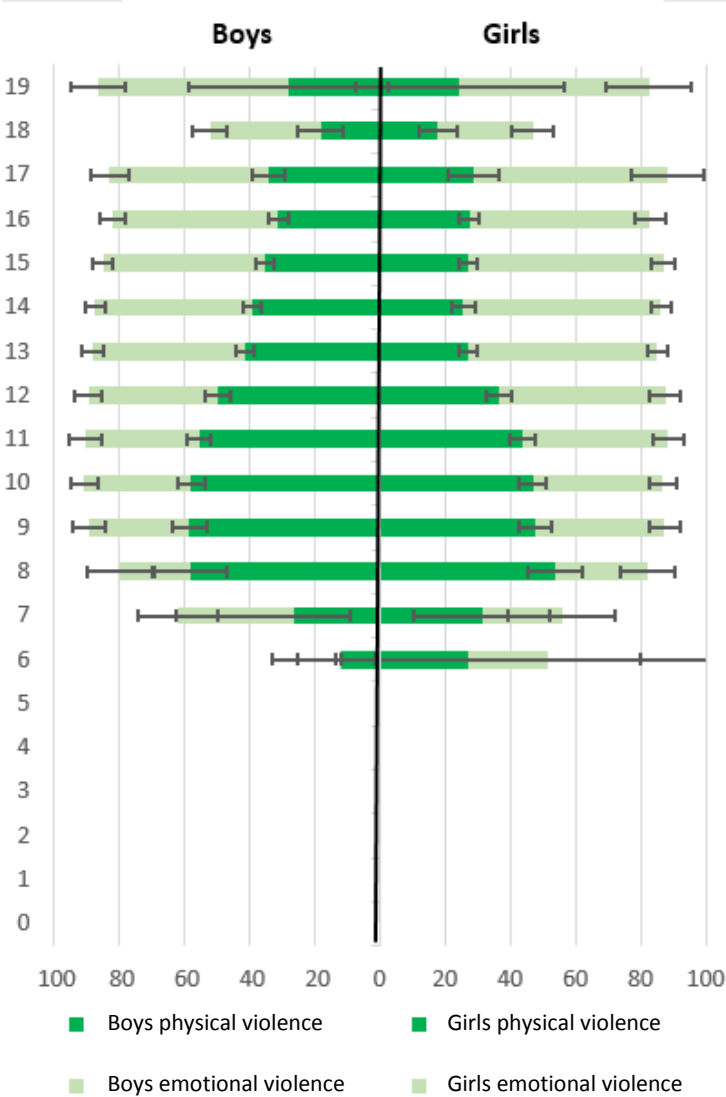
12. (witness* OR expos*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR harass*).ti,id.
13. 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12
14. 4 AND 13
15. 1 OR 14
16. Surveys/
17. (cross sectional OR observational OR prevalence OR incidence OR transversal OR retrospective OR longitudinal OR survey* OR cohort OR follow up OR followup).ti,id.
18. 16 OR 17
19. 15 AND 18
20. exp Africa/ OR exp America/ OR exp Asia/ OR exp Australia/ OR exp Europe/ OR exp Pacific Islands/ OR exp Oceania/
21. (Afghanistan OR Albania OR Algeria OR Africa OR American Samoa OR Andorra OR Angola OR Anguilla OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Australia OR Austria OR Azerbaijan OR Bahamas OR Bahrain OR Bangladesh OR Barbados OR Belarus OR Belgium OR Belize OR Benin OR Bermuda OR Bhutan OR Bolivia OR Bosnia OR Botswana OR Bougainville OR Brazil OR British Indian Ocean OR British Virgin Islands OR Brunei OR Bulgaria OR Burkina Faso OR Burundi OR Cambodia OR Cameroon OR Canada OR Cape Verde Islands OR Cayman Islands OR Central African Republic OR Chad OR Central America OR Chile OR China OR Macau OR Taiwan OR Colombia OR Comoros OR Congo OR Cook Islands OR Costa Rica OR Ivory Coast OR Croatia OR Cuba OR Cyprus OR Czech Republic OR Denmark OR Djibouti OR Dominica OR Dominican Republic OR Ecuador OR England OR Egypt OR El Salvador OR Equatorial Guinea OR Eritrea OR Estonia OR Ethiopia OR Europe OR Faeroe Islands OR Falkland Islands OR Federated States of Micronesia OR Fiji OR Finland OR France OR French Guiana OR French Polynesia OR Gabon OR Gambia OR Georgia OR Germany OR Ghana OR Gibraltar OR Greece OR Greenland OR Grenada OR Guadeloupe OR Guam OR Guatemala OR Guinea OR Guinea-Bissau OR Guyana OR Haiti OR Holy See OR Honduras OR Hungary OR Iceland OR India OR Indonesia OR Iran OR Iraq OR Ireland OR Israel OR Italy OR Jamaica OR Japan OR Jordan OR Kazakhstan OR Kenya OR Kiribati OR Korea OR Kosovo OR Kuwait OR Kyrgyzstan OR Laos OR Latvia OR Lebanon OR Lesotho OR Liberia OR Libya OR Liechtenstein OR Lithuania OR Luxembourg OR Macedonia OR Madagascar OR Malawi OR Malaysia OR Maldives OR Mali OR Malta OR Martinique OR Mauritania OR Mauritius OR Mayotte OR Mexico OR Moldova OR Monaco OR Mongolia OR Montenegro OR Montserrat OR Morocco OR Mozambique OR Myanmar OR Namibia OR Nauru OR Nepal OR Netherlands OR Netherlands Antilles OR New Caledonia OR New Zealand OR Nicaragua OR Niger OR Nigeria OR Norway OR Oman OR Pakistan OR Palestine OR Panama OR Papua New Guinea OR Paraguay OR Peru OR Philippines OR Poland OR Portugal OR Puerto Rico OR Qatar OR Romania OR Russia OR Rwanda OR Saint Barthelemy OR Saint Helena OR Saint Kitts OR Saint Lucia OR Saint Martin OR Saint Pierre OR Saint Vincent OR Samoa OR San Marino OR Sao Tome OR Saudi Arabia OR Scotland OR Senegal OR Serbia OR Seychelles OR Sierra Leone OR Singapore OR Slovakia OR Slovenia OR Solomon Islands OR Somalia OR South Africa OR Spain OR Sri Lanka OR Sudan OR Suriname OR Swaziland OR Sweden OR Switzerland OR Syria OR Tajikistan OR Tanzania OR Thailand OR Timor Leste OR Togo OR Tokelau Islands OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turks OR Caicos OR Tuvalu OR Uganda OR Ukraine OR United Arab Emirates OR United Kingdom OR United States OR Uruguay OR Virgin Islands OR Uzbekistan OR Vanuatu OR Venezuela OR Vietnam OR Futuna OR Wales OR Yemen OR Zambia OR Zimbabwe OR Reunion OR Sao Tome OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR New Hampshire OR New Jersey OR New Mexico OR New York OR North Carolina OR North Dakota OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR Rhode Island OR South Carolina OR South Dakota OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR West Virginia OR Wisconsin OR Wyoming).hw,ti,id.
22. 20 OR 21
23. 19 and 22
24. (comment OR letter OR editorial OR conference abstract OR news OR newspaper article OR patient education handout OR case report).pt.
25. 23 NOT 24
26. systematic review.ti.
27. 25 NOT 26

28. exp animals/
29. exp man/
30. 28 NOT (28 and 29)
31. 27 NOT 30

Confidential: For Review Only

Annex 10. Physical and emotional violence perpetrated by students against boys and girls in school

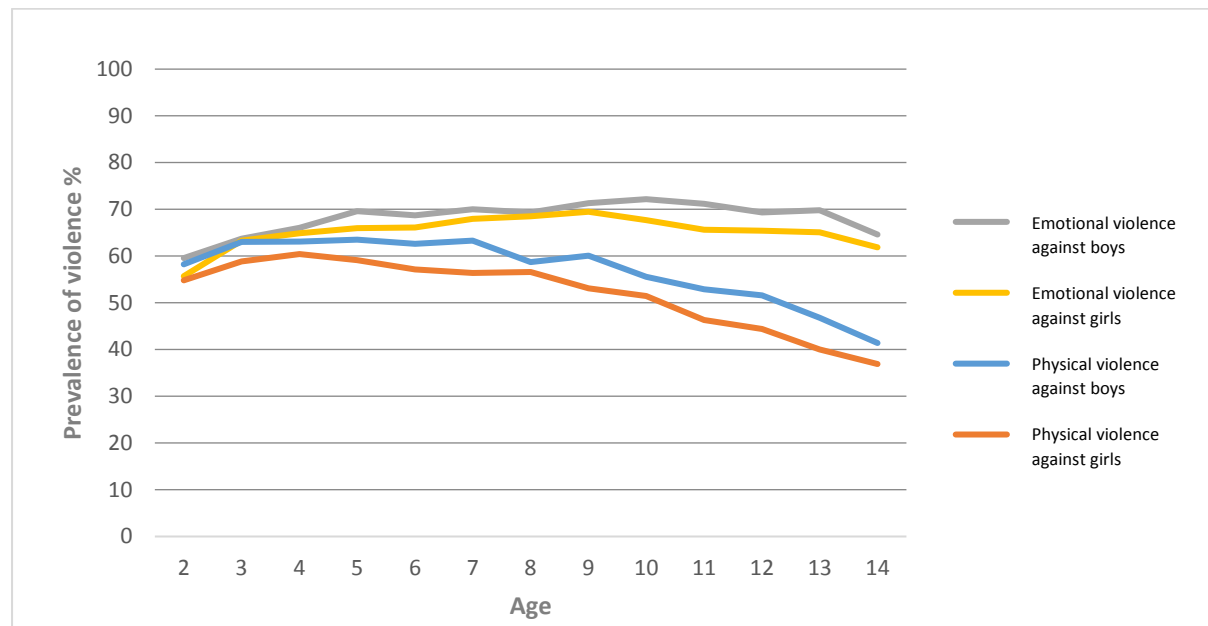
Figure 10.0. Prevalence of physical and emotional violence perpetrated by students against boys and girls in school in the past year (based on self-report)



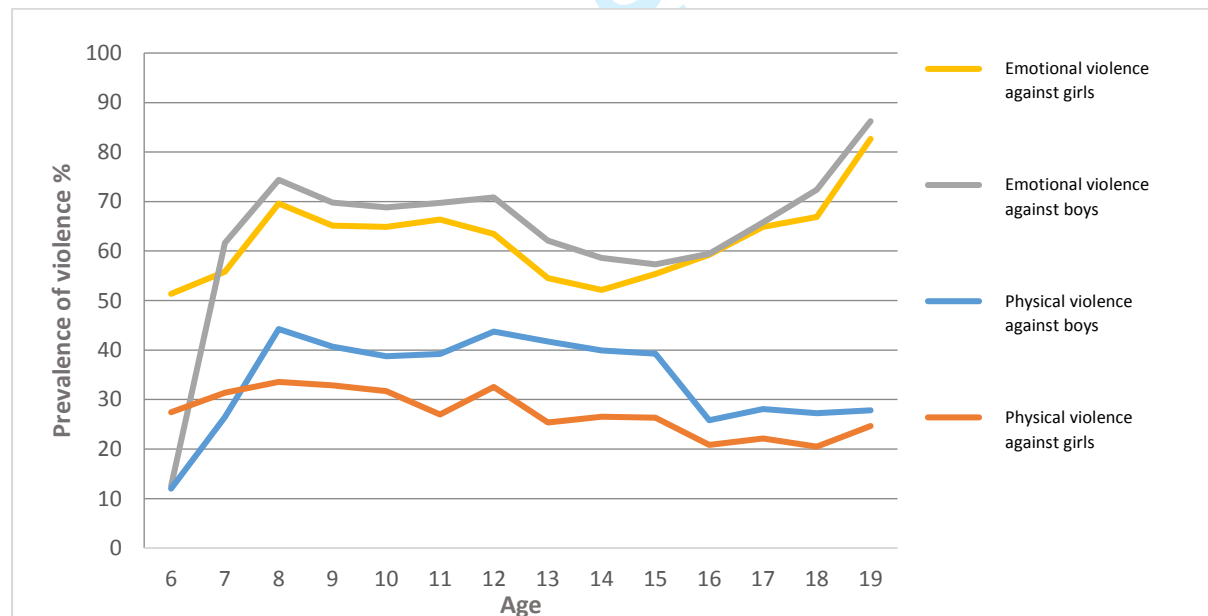
Notes: Estimates provided without adjustment for the WHO regional estimation proportion of students attending primary and secondary schools. Data sources: Global School-Based Health Surveys (GSHS), Health Behaviour in School-Aged Children (HBSC), Progress in International Reading Literacy Study (PIRLS), Trends in International Mathematics and Science Study (TIMSS) and systematic review publications. Definitions are provided in Annex 3. Pooled prevalence estimates at ages 6, 7 and 19 years are from unadjusted meta-analyses, all others are adjusted meta-regression estimates. To read bar graph: age of the child is on the y-axis; prevalence of each form of violence is on the x axis. Prevalence corresponds to the distance of the bar along the x-axis for boys (to the left), and girls (to the right). Forms of violence are overlaid; and the black bars are a 95% confidence interval.

Annex 2. Unadjusted global violence prevalence estimates of violence against children

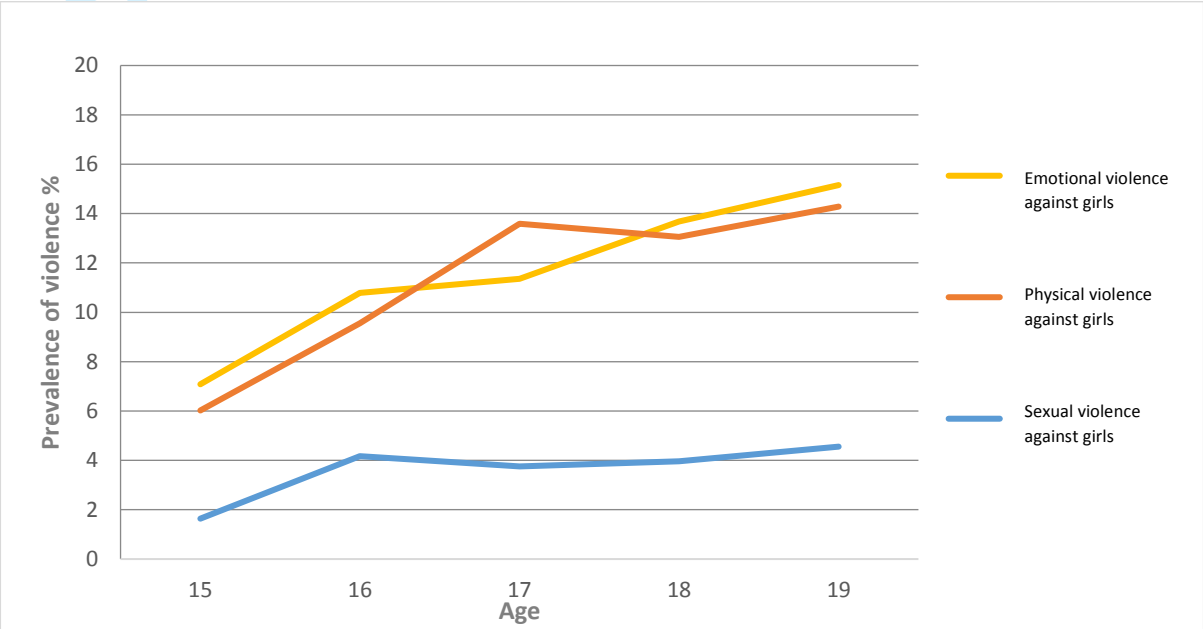
2.0 Prevalence of physical and emotional violence perpetrated by household members against boys and girls in the past month, by age of child (unadjusted global pooled estimates)



2.1 Prevalence of physical and emotional violence perpetrated by students against boys and girls in the past 12 months, by age of child (unadjusted global pooled estimates)



2.2 Physical, emotional and sexual violence perpetrated by intimate or dating partners against girls in the past 12 months, by age of girl (unadjusted global pooled estimates - adjusted by population ever had sex only)



Annex 3. Definitions of violence and sources of data for meta-regression models

3.0 Definitions of physical and emotional violence from household members

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|------------------|--|
| Multiple Indicator Cluster Surveys (MICS), Demographic and Health Surveys (DHS) | Proxy reports from caregivers about violence from household members | Physical | Adapted Conflict Tactics Scale. Answered 'yes' or 'no' to the following: Adults use certain ways to teach children the right behaviour or to address a behaviour problem. I will read various methods that are used. Please tell me if you or anyone else in your household has used this method with (name) in the past month: 1) Shook him/her; 2) Spanked, hit or slapped him/her on the bottom with bare hand; 3) Hit him/her on the bottom or elsewhere on the body with something like a belt, hairbrush, stick or other hard object; 4) Hit or slapped him/her on the face, head or ears; 5) Hit or slapped him/her on the hand, arm, or leg; 6) Beat him/her up, that is hit him/her over and over as hard as can. A child was considered exposed if having experienced at least 1 act of violence, according to the caregiver report. |
| Multiple Indicator Cluster Surveys (MICS), Demographic and Health Surveys (DHS) | Proxy reports from caregivers about violence from household members | Emotional | Adapted Conflict Tactics Scale. Answered 'yes' or 'no' to the following: Adults use certain ways to teach children the right behaviour or to address a behaviour problem. I will read various methods that are used. Please tell me if you or anyone else in your household has used this method with (name) in the past month. 1) Shouted, yelled at or screamed at him/her; 2) Called him/her dumb, lazy, or another name like that. (took away privileges, forbade something (name) liked or did not allow him/her to leave the house. – not included.) A child was considered exposed if having experienced at least 1 act of violence, according to the caregiver report. |
| Good Schools Study | Children's self reports (not included in main regression model; detailed in Annex 7) | Physical | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI). Answered 'yes' or 'no' to the following: Has [a parent or caregiver or another relative] ever: 1) Twisted your arm or any other body part, slapped you, pushed you or thrown something at you? 2) Punched you, kicked you, or hit you with a closed fist? 3) Hit you with an object, such as a stick or a cane, or whipped you? 4) Cut you with a sharp object or burnt you? A child was considered exposed if reporting having experienced at least 1 act of violence. |
| Good | Children's | Emotional | International Society for the Prevention of Child Abuse |

| Data source | Notes | Form of Violence | Definition of violence |
|--|--|------------------|---|
| Schools Study | self reports (not included in main regression model; detailed in Annex 7) | | and Neglect Screening Tool-Child Institutional (ICAST-CI). Answered 'yes' or 'no' to the following: Has [a parent or caregiver or another relative] ever: 1) Insulted you, or called you rude or hurtful names? 2) Accused you of witchcraft? 2) Locked you out or made you stay outside? 4) Not given you food? A child was considered exposed if reporting having experienced at least 1 act of violence. |
| Violence Against Children Surveys (VACS) | Children's self reports (not included in main regression model; detailed in Annex 7) | Physical | Answered 'yes' or 'no' to the following: Kenya and Tanzania: 1) Has a parent or any adult relative ever punched you, kicked you, whipped you, or beat you with an object? 2) Has a parent or any adult relative ever used or threatened to use a knife or other weapon against you? Haiti: 1) Has/did a parent, caregiver, any adult relative, or another adult household member ever punch you, kick you, whip you, or beat you with an object? 2) Has/did a parent, caregiver, any adult relative, or another adult household member ever choke you, smother you or try to drown you? 3) Has/did a parent, caregiver, any adult relative, or another adult household member ever burn or scald you intentionally (including putting hot pepper in your mouth or on another body part)? 4) Has/did a parent, caregiver, any adult relative, or another adult household member ever use or threaten to use a knife or other weapon against you? A child was considered exposed if reporting having experienced at least 1 act of violence. |
| Violence Against Children Surveys (VACS) | Children's self reports (not included in main regression model; detailed in Annex 7) | Emotional | Haiti: 1) Has/did a parent, caregiver, any adult relative, or another adult household member ever say that you were not loved or did not deserve to be loved?, 2) Has/did a parent, caregiver, any adult relative, or another adult household member ever say that they wished you had never been born or were dead?, 3) Has/did a parent, caregiver, any adult relative, or another adult household member ever ridicule you or put you down (for example say that you were stupid or useless)?, 4) Has/did a parent, caregiver, any adult relative, or another adult household member ever threaten to abandon you or threaten you that they would force you to leave home? A child was considered exposed if reporting having experienced at least 1 act of violence. |
| Helweg-Larsen, 2012 | Children's self | Physical | Danish version of the Conflict Tactics Scale created by Straus. The scale consists of 14 items beginning with |

| Data source | Notes | Form of Violence | Definition of violence |
|-------------|--|------------------|--|
| | reports (not included in main regression model; detailed in Annex 7) | | aggressive verbalization by the parent towards the child and moving to severe physically violent acts. Participants responded by indicating whether they had experienced such acts (1 = yes) or not (0 = no) during the previous 12 months. An adolescent was considered to have been exposed to physical violence if reporting having experienced at least one act of mild or severe physical violence. (recall: 12 months) |

3.1 Physical violence from students, data sources by age- boys

| age | Sys Rev | GSHS | HBSC | PIRL | TIMSS | Total |
|-------|------------|------|------|------|-------|-------|
| 6 | 1 | 0 | 0 | 0 | 0 | 1 |
| 7 | 0 | 0 | 0 | 3 | 3 | 6 |
| 8 | 0 | 0 | 0 | 30 | 22 | 52 |
| 9 | 0 | 0 | 0 | 129 | 83 | 212 |
| 10 | 0 | 0 | 0 | 139 | 91 | 230 |
| 11 | 0 | 0 | 42 | 127 | 81 | 250 |
| 12 | 0 | 90 | 0 | 76 | 100 | 266 |
| 13 | 0 | 103 | 42 | 36 | 169 | 350 |
| 14 | 1 | 105 | 0 | 12 | 156 | 274 |
| 15 | 1 | 105 | 42 | 4 | 139 | 291 |
| 16 | 1 | 9 | 0 | 2 | 107 | 119 |
| 17 | 0 | 7 | 0 | 1 | 65 | 73 |
| 18 | 0 | 0 | 0 | 0 | 30 | 30 |
| 19 | 0 | 0 | 0 | 0 | 3 | 3 |
| Total | 4 | 419 | 126 | 559 | 1,049 | 2,157 |

3.2 Physical violence from students, data sources by age- girls

| age | Sys Rev | GSHS | HBSC | PIRL | TIMSS | Total |
|-------|------------|------|------|------|-------|-------|
| 6 | 1 | 0 | 0 | 0 | 1 | 2 |
| 7 | 0 | 0 | 0 | 3 | 2 | 5 |
| 8 | 0 | 0 | 0 | 29 | 22 | 51 |
| 9 | 0 | 0 | 0 | 129 | 82 | 211 |
| 10 | 0 | 0 | 0 | 139 | 89 | 228 |
| 11 | 0 | 0 | 42 | 119 | 77 | 238 |
| 12 | 0 | 92 | 0 | 71 | 101 | 264 |
| 13 | 0 | 104 | 42 | 31 | 159 | 336 |
| 14 | 1 | 104 | 0 | 7 | 156 | 268 |
| 15 | 1 | 104 | 42 | 4 | 134 | 285 |
| 16 | 1 | 9 | 0 | 2 | 99 | 111 |
| 17 | 0 | 7 | 0 | 0 | 58 | 65 |
| 18 | 0 | 0 | 0 | 0 | 26 | 26 |
| 19 | 0 | 0 | 0 | 0 | 2 | 2 |
| Total | 4 | 420 | 126 | 534 | 1008 | 2092 |

3.3 Emotional violence from students, data sources per age- boys

| source | | | | |
|--------------|---------|------|-------|-------|
| age | Sys Rev | PIRL | TIMSS | Total |
| 6 | 1 | 0 | 0 | 1 |
| 7 | 0 | 1 | 3 | 4 |
| 8 | 0 | 16 | 22 | 38 |
| 9 | 0 | 51 | 83 | 134 |
| 10 | 0 | 56 | 91 | 147 |
| 11 | 0 | 52 | 81 | 133 |
| 12 | 0 | 30 | 100 | 130 |
| 13 | 0 | 14 | 169 | 183 |
| 14 | 2 | 7 | 156 | 165 |
| 15 | 1 | 3 | 139 | 143 |
| 16 | 0 | 2 | 107 | 109 |
| 17 | 1 | 1 | 65 | 67 |
| 18 | 0 | 0 | 30 | 30 |
| 19 | 0 | 0 | 3 | 3 |
| Total | 5 | 233 | 1,049 | 1,287 |

Note: emotional cyber bullying not included in regression models (Data sources: HSBC and publications).

3.4 Emotional violence from students, data source per age- girls

| age | Sys Rev | PIRL | TIMSS | Total |
|--------------|---------|------|-------|-------|
| 6 | 1 | 0 | 1 | 2 |
| 7 | 0 | 0 | 2 | 2 |
| 8 | 0 | 16 | 22 | 38 |
| 9 | 0 | 51 | 82 | 133 |
| 10 | 0 | 56 | 89 | 145 |
| 11 | 0 | 50 | 77 | 127 |
| 12 | 0 | 25 | 102 | 127 |
| 13 | 0 | 13 | 160 | 173 |
| 14 | 2 | 4 | 157 | 163 |
| 15 | 1 | 3 | 135 | 139 |
| 16 | 0 | 2 | 100 | 102 |
| 17 | 1 | 0 | 59 | 60 |
| 18 | 0 | 0 | 26 | 26 |
| 19 | 0 | 0 | 2 | 2 |
| Total | 5 | 220 | 1,014 | 1,239 |

Note: cyber emotional bullying not included in regression models (Data sources: HSBC and publications).

3.5 Definitions of physical and emotional violence from students

| Data source | Notes | Form of Violence | Definition of violence |
|---------------|-------------------------|------------------|--|
| GSHS | Children's self reports | Physical | Physical attack or physical fight in the last 12 months. Some GSHS only ask about physical fights in last 12 months |
| HBSC | Children's self reports | Physical | Physical fight in the last 12 months |
| TIMSS, PIRLS | Children's self reports | Physical | Hit or hurt by another student at school. Some older PIRLS surveys may have used "injured by another student". All 2011 surveys asked about the last 12 months and all surveys prior to 2011 asked about experience in the last month. |
| Marsh, 2010 | Children's self reports | Physical | Participants reported the frequency with which they themselves had experienced this year at school: physically hurting (Nairn & Smith, 2002). Item responses were on a 4-point scale with 1=often and 4=never. 12 months recall. |
| Undheim, 2010 | Children's self reports | Physical | I am tormented, beaten, pulled by the hair, kicked, or attacked in a bad way (physical assault). Rated on a 0- to 5-point scale from never to more than three times a week during the past 6 months, in school or on the way to school. |
| Zhu, 2015 | Children's self reports | Physical | Similar question asked for peer physical violence (not explicitly given) "Did a group of kids or gang hit, jump, or attack you?". 12 months recall. |
| Jansen, 2012 | Proxy report by teacher | Physical | Bullying and victimization during the past three months were studied as outcome. The teacher of each elementary school child rated the occurrence of four victimization and four bullying items. The victimization items assessed 1) whether a child was physically victimized by other children, for instance by being hit, kicked, pinched, or bitten (further referred to as physical victimization), etc. |
| TIMSS, PIRLS | Children's self reports | Emotional | TIMSS 2003 and 2007 asked about during the last month at school: was something stolen from you, were you made fun of or called names, left out of games or activities by other students, were you made to do things you didn't want to do by other students. PIRLS 2011 asked three of the same questions, but did not ask "were you made to do things you didn't want to" but asked instead "did someone spread lies about you at school" and TIMSS 2011 asked all five emotional violence questions. PIRLS 2011 and TIMSS 2011 asked about the last 12 months. |
| Jansen, 2012 | Proxy report by teacher | Emotional | Bullying and victimization during the past three months were studied as outcome. The teacher of each elementary school child rated the occurrence of four victimization and four bullying items [20]. The victimization items assessed |

| Data source | Notes | Form of Violence | Definition of violence |
|-------------------|-------------------------|------------------|---|
| | | | 2) whether a child was verbally victimized, such as being teased, laughed at, or called names (verbal victimization); etc |
| Undheim, 2010 | Children's self reports | Emotional | "I am made a fool of, teased in a painful way, or somebody has said mean things to me (teasing); Rated on a 0- to 5-point scale from never to more than three times a week during the past 6 months, in school or on the way to school. |
| Serra-Negra, 2015 | Children's self reports | Emotional | Prior to the application of the questionnaire, the adolescents received explanations about what school bullying actually entails. Verbal school bullying was considered to be the occurrence of episodes in which the teen was bullied or harassed by a colleague or a group of adolescents in the school. Repeated provocation was also considered as verbal school bullying. Being a victim of verbal school bullying was identified using the following question, taken from the Brazilian National School-Based Adolescent Health Survey (PeNSE): In the last thirty days, have some of your classmates bullied or mocked you so much that you got hurt/annoyed/upset? The response options were as follows: 1) never; 2) rarely; 3) always or almost always. |
| Marsh, 2010 | Children's self reports | Emotional | Participants reported the frequency with which they themselves had both experienced this year at school: teasing/name calling. Item responses were on a 4-point scale with 1=often and 4=never. 12 month recall. |
| Landstedt, 2011 | Children's self reports | Emotional | During the past 12 months, participant experienced one or several of the following acts in school: Been socially excluded; Experienced somebody spreading false rumours about you and/or Experienced racist comments or actions. This definition of bullying only addresses emotional violence. |

3.6 Partner physical violence, data source per age- girls

| age | DHS | Sys Rev | GSS | RHS | VACS | WHO VAW | Total |
|-------|-----|------------|-----|-----|------|------------|-------|
| 15 | 26 | 2 | 1 | 5 | 2 | 2 | 38 |
| 16 | 47 | 1 | 1 | 6 | 2 | 5 | 62 |
| 17 | 56 | 5 | 0 | 6 | 2 | 8 | 77 |
| 18 | 62 | 0 | 0 | 6 | 2 | 10 | 80 |
| 19 | 65 | 0 | 0 | 6 | 2 | 11 | 84 |
| Total | 256 | 8 | 2 | 29 | 10 | 36 | 341 |

3.7 Partner physical violence question definitions, against girls

| Data source | Notes | Form of Violence | Definition of violence |
|-------------|---|---------------------|---|
| DHS | Children's self reports. Three questions. | Physical | 1) thrown something at her 2) beaten her up, 3) threatened her with a gun. |
| DHS | Children's self reports. Six questions. | Physical | 1) pushed her, shaken her, thrown something at her, 2) slap her or twist her arm, 3) punched her with his fist or with something that could hurt her 4) kicked her, dragged her, 5) tried to strangle her or burn her, 6) threatened her with a knife, gun or other type of weapon. |
| DHS | Children's self reports. Seven questions: | Physical | 1) pushed her, hit her, thrown something at her 2) slapped her, 3) twisted her arm, or pulled her hair 4) punched her with his fist or with something that could hurt her 5) kicked her, dragged her, 6) tried to choke her or burn her, or 7) threatened or attacked her with a knife, gun or other type of weapon. |
| DHS | Children's self reports. Eight questions. | Physical | 1) pushed her, shaken her, thrown something at her 2) slapped her, 3) punched her with his fist or with something that could hurt her 4) kicked her, dragged her or beaten her up, 5) tried to choke her or burn her, or 6) threatened with a knife, gun or other type of weapon, 7) attacked with a knife, gun or other type of weapon, 8) bitten her. |
| RHS | Children's self reports. Five questions. | Physical | 1) pushed her, shaken her, or threw something at her, 2) slapped her or twisted her arm, 3) hit her with his fist or something else that could hurt her, 4) kicked her, dragged her, or beat her up, 5) threatened to use a knife, gun, or another object to hurt her. |
| RHS | Children's self | Physical | 1) slapped her or threw something at her that could hurt her, 2) pushed her, shoved her, or pulled her hair, 3) hit |

| Data source | Notes | Form of Violence | Definition of violence |
|--------------------------|--|------------------|---|
| | reports. Five questions. | | her with his fist or with something else that could hurt her, 4) kicked her, dragged her or beat her up, 5) tried to choke or burn her on purpose |
| RHS | Children's self reports. Six questions. | Physical | 1) slapped her or threw something at her that could hurt her, 2) pushed her, shoved her, or pulled her hair, 3) hit her with his fist or something else that could hurt her, 4) kicked her, dragged her, or beat her up, 5) tried to choke or burn her on purpose, 6) threatened to use or has used a gun, knife or other weapon against her |
| VACS | Children's self reports. | Physical | 1) slap or push, 2) punch, kick, whip or beat, 3) threaten or use a weapon. |
| WHO VAW | Children's self reports. | Physical | Slapped you or thrown something at you that could have hurt you, pushed you or shoved you, Hit you with his fist or with something else that could have hurt you, kicked you, dragged you or beaten you up, choked or burnt you on purpose, threatened to use or actually used a gun, knife or other weapon against you. |
| Good Schools Study | Children's self reports. | Physical | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI) 1) Twisted your arm or any other body part, slapped you, pushed you or thrown something at you? 2) Punched you, kicked you, or hit you with a closed fist? 3) Hit you with an object, such as a stick or a cane, or whipped you? 4) Cut you with a sharp object or burnt you? |
| Ackerson, 2008 | Children's self reports. | Physical | How often have you been beaten or mistreated physically in the last 12 months: once, a few times, many times, or not at all? A woman was considered to have experienced recent IPV if she reported being physically abused by her husband in the previous 12 months. |
| Blitchtein-Winicki, 2012 | Children's self reports. | Physical | Recent physical violence (within the past 12 months) from a partner" to assess prevalence of women having suffered any kind of physical aggression from a partner. This was measured by a scale of 9 questions about the most recent husband's actions in the past 12 months: Did he push, hit, or throw something at you? Did he slap you or twist your arm? Did he hit you with a fist or something that would hurt you? Did he kick or drag you? Did he strangle or burn you? Did he attack/assault you? Did he threaten you with a knife, gun, or other weapon? Did he use physical force to force you to have sex, even if you did not want to? Did he force you to perform sexual acts that you did not consent to? If the answer was "Yes," the survey asked, "How often did this happen in the past 12 months?" |
| Dalal, 2013 | Children's | Physical | The survey data collected on IPV in the recent 12 months |

| Data source | Notes | Form of Violence | Definition of violence |
|-----------------|--------------------------|------------------|--|
| | self reports. | | (with the latest/current husband) were transformed into the following variable: Moderate physical violence: had the husband ever pushed, shaken or thrown something; ever slapped; ever punched with a fist or something harmful; ever kicked or dragged. |
| Silverman, 2004 | Children's self reports. | Physical | Physical dating violence against adolescent girls was assessed by inquiring as follows: during the past 12 months, did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose? |
| Spriggs, 2009 | Children's self reports. | Physical | The first was based on three items from the Conflict Tactics Scale (CTS2) that were included in the Wave II in-home questionnaire. For up to six romantic and/or sexual relationships reported since the last interview (approximately 18 months), respondents were asked if their partner had ever: (1) threatened them with violence; (2) thrown something at them that could hurt them; and/or (3) pushed or shoved them. A dichotomous summary variable (Any Victimization) was constructed indicating whether any of these experiences occurred in any of the relationships reported by the respondent. |
| Zablotska, 2009 | Children's self reports. | Physical | Regarding physical violence, women were asked: Has any of your sexual partners ever and in the past 12 months, has your husband/partner: Verbally abused or shouted at you? Pushed, pulled, slapped or held you down? Punched you? Kicked or dragged you? Tried to strangle you or burn you? Threatened or attacked you with a knife, gun or other weapon? (Yes/No for each). Physical abuse (ever and in the past 12 months) was defined as at least one positive response versus none during the specified time. |

3.8 Partner emotional violence, data source per age- girls

| age | DHS | GSS | RHS | WHO VAW | Total |
|--------------|------------|----------|-----------|------------|------------|
| 15 | 24 | 1 | 5 | 2 | 32 |
| 16 | 45 | 1 | 6 | 5 | 57 |
| 17 | 54 | 0 | 6 | 8 | 68 |
| 18 | 59 | 0 | 6 | 10 | 75 |
| 19 | 62 | 0 | 6 | 11 | 79 |
| Total | 244 | 2 | 29 | 36 | 311 |

3.9 Partner emotional violence question definitions, against girls

| Data source | Notes | Form of Violence | Definition of violence |
|-------------|--|------------------|--|
| DHS | Children's self reports. Two questions | Emotional | 1) said or done something to humiliate her in front of others, 2) harassed her. |
| DHS | Children's self reports. Two questions | Emotional | 1) said or done something to humiliate her in front of others; 2) threatened to hurt or harm her or someone close to her. |
| DHS | Children's self reports. Three questions | Emotional | 1) said or done something to humiliate her in front of others; 2) threatened to hurt or harm her or someone close to her; 3) insulted her or made her feel bad about herself |
| DHS | Children's self reports. Three questions | Emotional | 1) said or done something to humiliate her in front of others; 2) threatened to hurt or harm her or someone close to her; 3) swear at her. |
| RHS | Children's self reports. Two questions | Emotional | 1) insulted her or made her feel bad about herself, 2) threatened to hurt her or someone she cares about. |
| RHS | Children's self reports. Three questions | Emotional | 1) done something to humiliate her, 2) shouted at, insulted or called offensive names, 3) threatened to harm her or someone close to her. |
| RHS | Children's self reports. Four | Emotional | 1) insulted her or made her feel bad about herself, 2) belittled her or humiliated her in front of others, 3) done things on purpose to scare or intimidate her (for example by the way he looks at her, how he yells or breaks things), |

| Data source | Notes | Form of Violence | Definition of violence |
|--------------------------|--|------------------|--|
| | questions. | | 4) threatened to harm her or someone close to her. |
| RHS | Children's self reports. Five questions. | Emotional | 1) insulted her or made her feel bad about herself, 2) belittled her or humiliated her in front of others, 3) done things on purpose to scare or intimidate her (for example by the way he looks at her, how he yells or breaks things), 4) threatened to harm her or someone close to her, 5) threatened to take away her children. |
| WHO VAW | Children's self reports. | Emotional | 1) Insulted you or made you feel bad about yourself, 2) Belittled or humiliated in front of other people, 3) Did thing to scare or intimidate you on purpose, 4) Threatened to hurt you or someone you cared about. |
| Good Schools Study (GSS) | Children's self reports. | Emotional | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI) 1) Insulted you, or called you rude or hurtful names? 2) Accused you of witchcraft? 2) Locked you out or made you stay outside? 4) Not given you food? |

3.10 Partner sexual violence, data source per age- girls

| Source | | | | | | |
|--------|-----|---------|-----|-----|---------|-------|
| age | DHS | Sys Rev | GSS | RHS | WHO VAW | Total |
| 15 | 26 | 0 | 1 | 5 | 2 | 34 |
| 16 | 47 | 1 | 1 | 6 | 5 | 60 |
| 17 | 55 | 2 | 0 | 6 | 8 | 71 |
| 18 | 61 | 0 | 0 | 6 | 10 | 77 |
| 19 | 64 | 0 | 0 | 6 | 11 | 81 |
| Total | 253 | 3 | 2 | 29 | 36 | 323 |

3.11 Partner sexual violence question definitions, against girls

| Data source | Notes | Form of Violence | Definition of violence |
|-------------|--|------------------|--|
| DHS | Children's self reports. One questions | Sexual | 1) physically forced her to have sexual intercourse even when she did not want to. |
| DHS | Children's self reports. Two questions | Sexual | 1) physically forced her to have sexual intercourse or 2) forced her to perform any other sexual acts. |
| DHS | Children's self reports. | Sexual | 1) physically forced her to have unwanted sexual intercourse or 2) forced her to perform any other |

| Data source | Notes | Form of Violence | Definition of violence |
|--------------------------|---|------------------|---|
| | Three questions | | unwanted sexual acts, 3) forced her with threats or in any other way to perform sexual acts she did not want to. |
| DHS | Children's self reports. Four questions | Sexual | 1) physically forced her to have unwanted sexual intercourse or 2) forced her to perform any other unwanted sexual acts, 3) force you with threats or in any other way to have sexual intercourse with him or perform any other sexual acts against her will, 4) try or attempt to force, persuade or threaten her to have sexual intercourse with him or perform other sexual acts against her will. |
| RHS | Children's self reports. One questions | Sexual | 1) made her have sexual relations when she did not want to |
| RHS | Children's self reports. Two questions | Sexual | 1) did she ever feel forced because of fear (of her partner) to have unwanted sexual intercourse, 2) did he (they) ever use force to make her have sexual intercourse when she did not want to |
| RHS | Children's self reports. Two questions | Sexual | 1) had unwanted sexual relations because of fear of her partner, 2) physically forced to have sexual relations when she did not want to |
| WHO VAW | Children's self reports. | Sexual | Physically forced you to have sexual intercourse when you did not want to, did you have any sexual intercourse you did not want to because you were afraid of what he might do, did he ever force you to do something that you found degrading or humiliating. |
| Good Schools Study (GSS) | Children's self reports. | Sexual | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI) 1) Disturbed or bothered you by making sexual comments about you? 2) Kissed you, when you did not want them to? 3) Touched your genitals or breasts when you did not want them to, or in a way that made you uncomfortable? 4) Threaten or pressure you to make you do something sexual with them? 5) Make you have sex with them, because they threatened or pressured you? 6) Had sex with you, by physically forcing you? |
| Dalal, 2013 | Children's self reports. | Sexual | The survey data collected on IPV in the recent 12 months (with the latest/current husband) were transformed into the following variable: Sexual violence: had the husband ever physically forced sex when not wanted. |
| Puri, 2012 | Children's self reports. | Sexual | The dependent variable in the multivariate analysis was whether or not the individual woman reported having |

| Data source | Notes | Form of Violence | Definition of violence |
|-----------------|--------------------------|------------------|--|
| | | | experienced sexual violence by her husband in the 12 months preceding the interview. This variable was based on a series of questions that were asked in the survey these questions were: Did your husband ever physically force you to have sexual intercourse with him even when you did not want to? Was there ever a time when you were afraid to say no to sex with your husband? Did your husband ever threaten you that if you didn't have sex with him he would leave or go to another woman? Did your husband ever force you to do something sexual that you found degrading or humiliating? Women who answered affirmatively to any of these questions were counted as having experienced sexual violence. Women who answered yes to any of these questions were also asked if those experiences had occurred at all in the past 12 months, and if so how frequently. Women who responded affirmatively that they had experienced one or more of these acts in the past 12 months were categorized as having experienced sexual violence in the 12 months preceding the interview. |
| Zablotska, 2009 | Children's self reports. | Sexual | Regarding sexual coercion, women were asked. Have any of your sexual partners ever physically forced you to have sex when you did not want to? (Yes/No) and In the past 12 months, how many times did your husband/ partner physically force you to have sex when you did not want to? At least one event was considered as a report of sexual coercion in the past 12 months. |

3.12 Definitions for meta-analysis of physical and emotional violence from authority figures

| Data source | Notes | Form of Violence | Definition of violence |
|-------------|--|------------------|--|
| VACS | Children's self reports Authority figures | Physical | Kenya: Now let us discuss persons of authority, such as teachers, police and military. 1) Has an authority figure ever punched you, kicked you, whipped you, or beat you with an object? 2) Has an authority figure ever used or threatened to use a knife or other weapon against you? Tanzania: 1) Have you ever been punched, kicked, or whipped by teachers, policemen, religious leaders, soldiers, or other authority figures? 2) Have teachers, policemen, religious leaders, soldiers, or other authority figures ever threatened to use or actually used a gun, knife, or other weapon against you? Haiti: Now let us discuss public authority figures who you should be able to trust, such as teachers, police, other |

| Data source | Notes | Form of Violence | Definition of violence |
|--------------------|---|------------------|---|
| | | | security personnel such as MINUSTAH or UNPOL, religious leaders, or community leaders. 1) Has/did a public authority figure ever punch you, kick you, whip you, or beat you with an object? 2) Has/did a public authority figure ever choke you, smother you or tried to drown you? 3) Has/did a public authority figure ever burn or scald you intentionally (including putting hot pepper in your mouth or on another body part)? 4) Has/did a public authority figure ever use or threaten to use a knife or other weapon against you? |
| Good Schools Study | Children's self reports Teachers | Physical | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI) 1) Twisted your arm or any other body part, slapped you, pushed you or thrown something at you? 2) Punched you, kicked you, or hit you with a closed fist? 3) Hit you with an object, such as a stick or a cane, or whipped you? 4) Cut you with a sharp object or burnt you? |
| Haavet, 2011 | Children's self reports Adults | Physical | Experienced physical violence from an adult in the last 12 months. |

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Annex 4. Covariates included in regression models

In this analysis, we sought to include a range of studies using various definitions and methodologies. We used meta-regression to correct for differences in definitions and study methods as much as possible. For each set of meta-regressions below, we describe which covariates were fit for each model and give an example of STATA 14 code used to fit these models. We do not present a table with regression coefficients and model fit statistics because a separate model was run for each age, sex, and specific form of violence (meaning the total number of models we would need to present would be in the region of 200).

4.0 Physical and emotional violence from household members

For these meta regressions, all data was drawn from the MICS and DHS (which uses the MICS survey module). These surveys utilized very similar definitions and methodological characteristics, and thus we have not adjusted for any covariates in these models. Here is an example of STATA code used to fit a meta-regression model to describe the prevalence of emotional violence by household members in 8-year-old girls:

```
xi, noomit: metareg prevt i.WHOregion if form=="emo" & perpsg=="Family" & sex=="girls" &
age==8 , wsse(sep) noconstant
```

Where: Prevt= prevalence estimate %, WHOregion = WHO region, form= form of violence, perpsg= perpetrator type, sex=sex of victim, age = age of victim in years, sep = standard error %.

4.1 Physical and emotional violence from students

The covariates included in meta-regression models for emotional and physical violence from students were:

- Violence definition=0 if definition, 1-x if not (1) (variable name: def_phy)
 - Definition of physical violence: hit or hurt by another student at school.
 - Definition of emotional violence: something stolen from you at school, made fun of or called names at school, left out of games or activities by other students at school, made to do things you didn't want to do by other students, someone spread lies about you at school.
- Areas mixed urban and rural=0, 1 if urban (variable name: urban)
 - Area was not included in emotional violence to simplify the model because there was almost no variation in this variable.
- Subnational =0 if national, 1 if subnational. (variable name: rep)
- Interviewer trained =0 if trained, 1 if not or unclear. (variable name: interviewer)
- Recall period=0 if 12 months, 1 if under 12 months. (variable name: recallad)
- Study violence missing data recorded as under 5% =0, 1 if not. (variable name: missing)
- Standard Error obtained from study=0, 1 if derived. (variable name: seissue)

Here is an example of STATA code used to fit meta-regression model to describe the prevalence of physical violence from students among 14-year-old boys:

```
xi, noomit: metareg prevt i.WHOregion i.def_phy recallad rep urban interviewer seissue missing if
form=="emo" & perpsg=="Peer_as" & sex=="boys" & age==14 , wsse(sep) noconstant
```

Where: Prev_t= prevalence estimate %, WHO_{region} = WHO region, form= form of violence, perps_g= perpetrator type, sex=sex of victim, age = age of victim in years, sep = standard error %.

4.2 Physical, emotional and sexual violence from intimate partners

The covariates included in meta-regression models for physical violence from partners were:

- Subnational =0 if national, 1 if subnational.
- Sample from community=0, 1 if school. (variable name: samp)
- Interviewer trained =0 if trained, 1 if not or unclear.
- Recall period=0 if 12 months, 1 if under 12 months.
- Violence definition gold standard 0, 1 if not. (variable name: acts)
 - DHS, RHS, WHO VAW and Publications that asked about 5 or more acts of physical violence were set as the gold standard e.g.: DHS 1) pushed her, shaken her, thrown something at her, 2) slap her or twist her arm, 3) punched her with his fist or with something that could hurt her 4) kicked her, dragged her, 5) tried to strangle her or burn her, 6) threatened her with a knife, gun or other type of weapon.

The covariates included in meta-regression models for emotional violence from partners were:

- Violence definition gold standard 0, 1 if not.
 - DHS, RHS, WHO VAW definition was set as the gold standard; some variation but all DHS/RHS ask 2 or 3 modified CTS questions and WHO VAW 4 questions, e.g. DHS: 1) said or done something to humiliate her in front of others; 2) threatened to hurt or harm her or someone close to her; 3) insulted her or made her feel bad about herself.

The covariates included in meta-regression models for sexual violence from partners were:

- Subnational =0 if national, 1 if subnational.
- Sample from community=0, 1 if school
- Area mixed urban and rural =0, rural=1
- Violence definition gold standard =0, 1 if not.
 - DHS surveys only with 3 or more sexual violence questions and WHO VAW surveys which asked 4 questions were considered gold standard e.g.: DHS with the minimum number of 3 questions: 1) physically forced her to have unwanted sexual intercourse or 2) forced her to perform any other unwanted sexual acts, 3) forced her with threats or in any other way to perform sexual acts she did not want to.

Here are examples of STATA code used to fit meta-regression model to describe the prevalence of physical, emotional and sexual violence from students among 15-year-old girls:

Physical:

```
xi, noomit: metareg prevps i.WHOregion rep acts samp interview recallad if form=="phy" & perps=="Partner" & sex=="girls" & age==15 , wsse(sep) noconstant
```

Emotional:

```
xi, noomit: metareg prevps i.WHOregion acts if form=="emo" & perps=="Partner" & sex=="girls" & age==15 , wsse(sep) noconstant
```

Sexual:

xi, noomit: metareg prevps i.WHOregion acts rep samp urban if form=="sex" & perpsg=="Partner"
& sex=="girls" & age=="a", wsse(sep) noconstant

Where: Prevs= percentage prevalence estimate adjusted by proportion of country population ever
had sex by aged 20, sep = standard error %, form= form of violence, perpsg= perpetrator subgroup.

Annex 5: Pooled meta-regression prevalence estimates of violence against children, with 95% confidence interval

Figure 5.0. Prevalence of physical and emotional violence ever perpetrated by students against boys and girls, by age of child (based on self-report)

| age | Boys Emotional | | | Boys Physical | | |
|-----|----------------|-------|-------|---------------|-------|-------|
| | Prev% | LCI | UCI | Prev% | LCI | UCI |
| 18 | 32.35 | 27.13 | 37.57 | 11.10 | 4.24 | 17.95 |
| 17 | 52.11 | 46.13 | 58.09 | 20.98 | 16.16 | 25.81 |
| 16 | 51.31 | 47.35 | 55.27 | 19.21 | 16.15 | 22.27 |
| 15 | 52.97 | 49.71 | 56.22 | 22.06 | 19.37 | 24.76 |
| 14 | 54.54 | 51.67 | 57.41 | 24.58 | 21.91 | 27.25 |
| 13 | 55.37 | 52.08 | 58.66 | 26.10 | 23.46 | 28.74 |
| 12 | 56.43 | 52.36 | 60.50 | 31.51 | 27.84 | 35.18 |
| 11 | 83.27 | 78.23 | 88.31 | 51.13 | 47.43 | 54.83 |
| 10 | 83.37 | 79.32 | 87.42 | 53.22 | 49.13 | 57.31 |
| 9 | 82.21 | 77.25 | 87.17 | 53.76 | 48.68 | 58.85 |
| 8 | 73.42 | 63.18 | 83.67 | 53.75 | 42.70 | 64.80 |

| age | Girls Emotional | | | Girls Physical | | |
|-----|-----------------|-------|-------|----------------|-------|-------|
| | Prev% | LCI | UCI | Prev% | LCI | UCL |
| 18 | 27.90 | 21.66 | 34.15 | 9.22 | 3.51 | 14.94 |
| 17 | 55.25 | 44.27 | 66.23 | 17.70 | 9.69 | 25.71 |
| 16 | 51.38 | 46.61 | 56.15 | 16.35 | 13.19 | 19.51 |
| 15 | 53.84 | 50.23 | 57.45 | 16.56 | 13.85 | 19.28 |
| 14 | 53.22 | 50.16 | 56.29 | 15.64 | 11.92 | 19.36 |
| 13 | 52.90 | 49.94 | 55.86 | 16.72 | 13.75 | 19.68 |
| 12 | 54.88 | 50.19 | 59.57 | 23.56 | 19.60 | 27.52 |
| 11 | 80.18 | 75.45 | 84.91 | 39.94 | 35.93 | 43.94 |
| 10 | 78.72 | 74.54 | 82.91 | 42.89 | 38.79 | 46.99 |
| 9 | 79.33 | 74.62 | 84.03 | 43.67 | 38.79 | 48.55 |
| 8 | 74.84 | 66.64 | 83.04 | 48.97 | 40.77 | 57.17 |

Abbreviations: Prev%: Prevalence estimate; LCI: Lower 95% confidence interval; UCI: Upper 95%CI

Figure 5.1. Prevalence of physical and emotional violence ever perpetrated by household members against boys and girls, by age of child (based on proxy report from household member)

| age | Boys Emotional | | | Boys Physical | | |
|-----|----------------|-------|-------|---------------|-------|-------|
| | Prev% | LCI | UCI | Prev% | LCI | UCI |
| 14 | 67.89 | 60.94 | 74.84 | 40.87 | 33.8 | 47.94 |
| 13 | 72.12 | 65.93 | 78.32 | 47.7 | 39.61 | 55.79 |
| 12 | 73.24 | 66.44 | 80.04 | 53.08 | 45.53 | 60.62 |
| 11 | 75.11 | 67.97 | 82.24 | 54.2 | 46.5 | 61.9 |
| 10 | 75.76 | 68.51 | 83.01 | 57.32 | 49.66 | 64.97 |
| 9 | 74.56 | 67.48 | 81.64 | 61.69 | 54.39 | 68.99 |
| 8 | 74.46 | 67.08 | 81.85 | 60.86 | 53.12 | 68.6 |
| 7 | 74.36 | 67.30 | 81.43 | 64.67 | 57.71 | 71.63 |
| 6 | 72.96 | 66.56 | 79.37 | 64.99 | 57.36 | 72.63 |
| 5 | 72.60 | 65.27 | 79.93 | 65.25 | 57.85 | 72.64 |
| 4 | 69.99 | 62.79 | 77.19 | 64.79 | 58.46 | 71.13 |
| 3 | 68.24 | 60.84 | 75.64 | 63.28 | 56.62 | 69.94 |
| 2 | 61.16 | 53.37 | 68.95 | 58.65 | 51.76 | 65.54 |

| age | Girls Emotional | | | Girls Physical | | |
|-----|-----------------|-------|-------|----------------|-------|-------|
| | Prev% | LCI | UCL | Prev% | LCI | UCI |
| 14 | 65.21 | 58.85 | 71.57 | 35.86 | 28.16 | 43.55 |
| 13 | 67.01 | 60.52 | 73.50 | 40.06 | 32.47 | 47.65 |
| 12 | 70.60 | 64.01 | 77.18 | 46.14 | 38.18 | 54.11 |
| 11 | 70.38 | 63.74 | 77.03 | 47.20 | 39.01 | 55.39 |
| 10 | 71.52 | 64.06 | 78.98 | 52.80 | 45.46 | 60.15 |
| 9 | 73.47 | 66.95 | 79.99 | 55.53 | 47.09 | 63.97 |
| 8 | 72.56 | 65.85 | 79.26 | 57.46 | 50.53 | 64.39 |
| 7 | 73.72 | 66.97 | 80.47 | 60.83 | 52.90 | 68.75 |
| 6 | 71.07 | 63.98 | 78.15 | 60.38 | 52.75 | 68.01 |
| 5 | 70.91 | 63.30 | 78.52 | 60.58 | 52.93 | 68.22 |
| 4 | 69.93 | 62.66 | 77.21 | 63.15 | 55.98 | 70.32 |
| 3 | 65.84 | 58.54 | 73.14 | 60.87 | 54.31 | 67.43 |
| 2 | 59.85 | 52.09 | 67.61 | 56.24 | 49.20 | 63.28 |

Abbreviations: Prev%: Prevalence estimate; LCI: Lower 95% confidence interval; UCI: Upper 95%CI

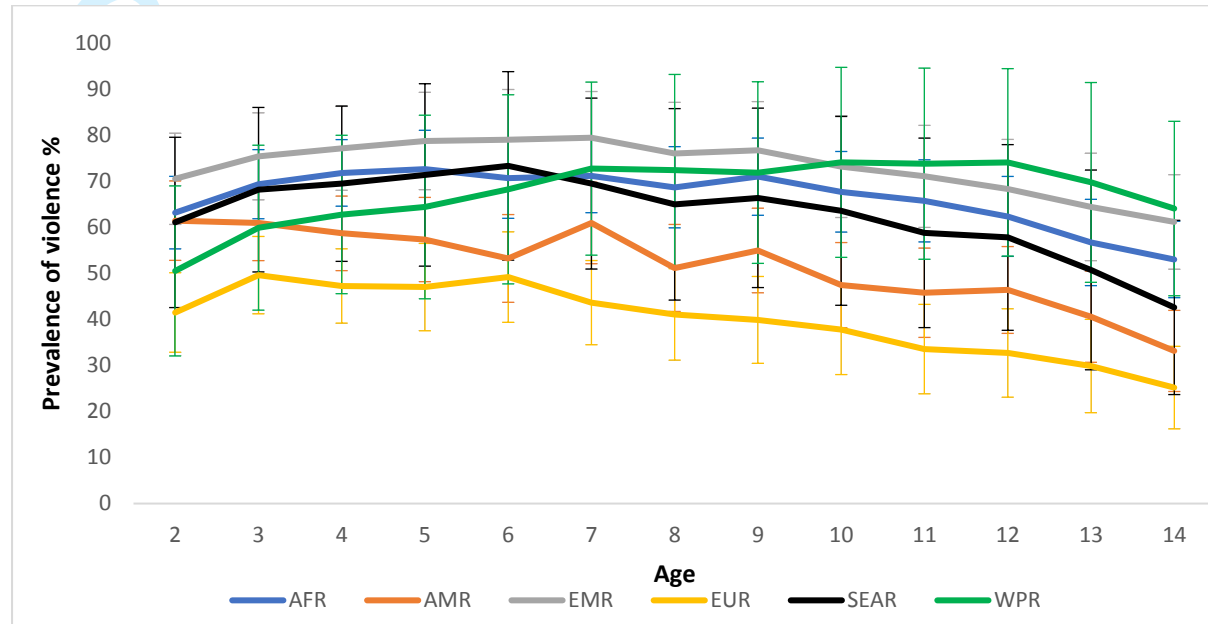
Figure 5.2. Prevalence of sexual, physical and emotional violence ever perpetrated by intimate partners against girls, by age of girl (based on self-report)

| Girls Sexual | | | |
|-----------------|-------|-------|-------|
| age | Prev% | LCI | UCI |
| 19 | 5.17 | 3.29 | 7.04 |
| 18 | 5.86 | 3.67 | 8.04 |
| 17 | 3.66 | 1.99 | 5.33 |
| 16 | 3.40 | 1.21 | 5.58 |
| 15 | 1.50 | -0.34 | 3.35 |
| Girls Physical | | | |
| age | Prev% | LCI | UCI |
| 19 | 12.55 | 10.10 | 15.00 |
| 18 | 11.73 | 9.14 | 14.32 |
| 17 | 12.92 | 9.29 | 16.55 |
| 16 | 10.01 | 6.20 | 13.81 |
| 15 | 7.06 | 3.28 | 10.85 |
| Girls Emotional | | | |
| age | Prev% | LCI | UCI |
| 19 | 13.24 | 10.01 | 16.47 |
| 18 | 12.98 | 10.05 | 15.90 |
| 17 | 9.48 | 6.32 | 12.64 |
| 16 | 8.27 | 4.85 | 11.69 |
| 15 | 8.07 | 4.11 | 12.03 |

Abbreviations: Prev%: Prevalence estimate; LCI: Lower 95% confidence interval; UCI: Upper 95%CI

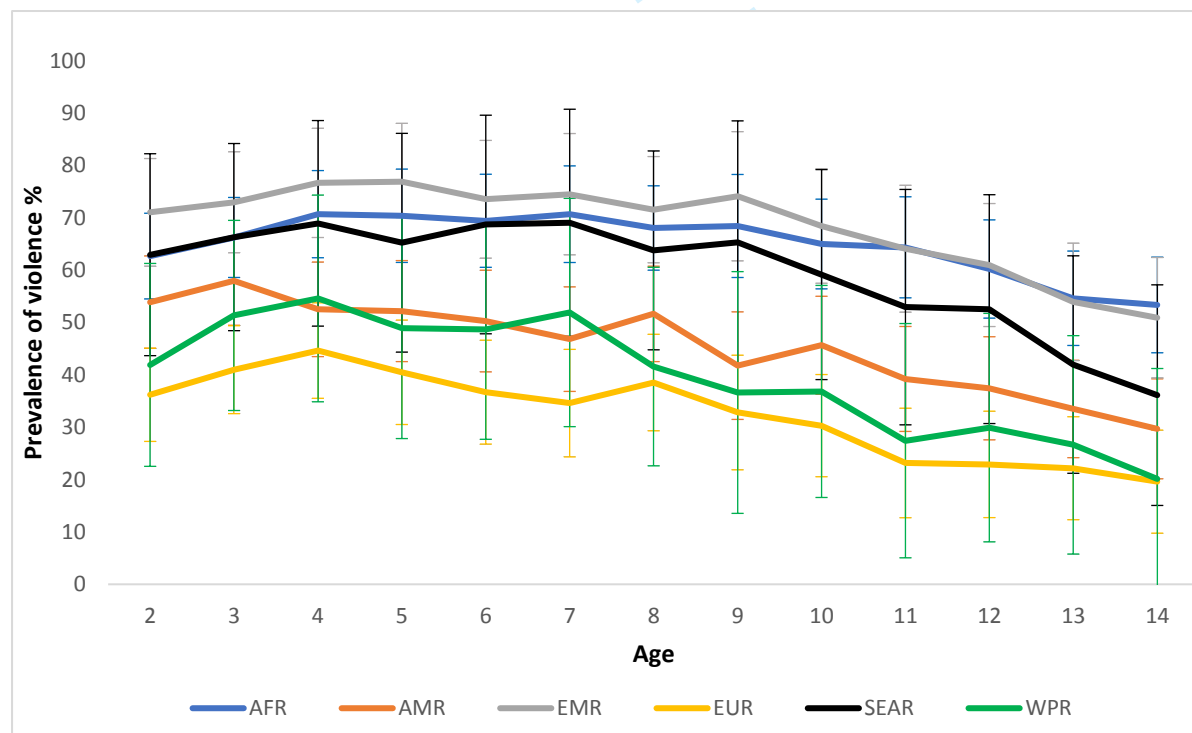
Annex 6: Prevalence estimates of violence against children according to WHO Region, with 95% confidence interval

6.0 Regional adjusted prevalence of physical violence perpetrated by household members against boys in the past month, by age of boy



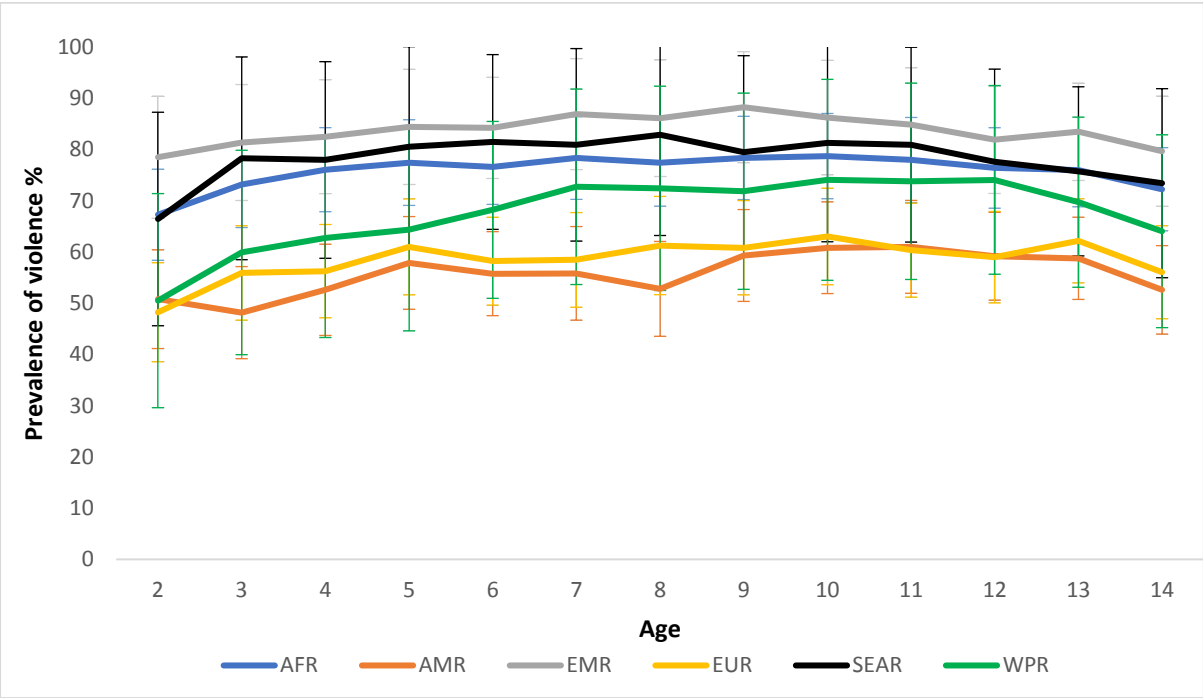
Abbreviations: AFR: Africa; AMR: America; EMR: Eastern-Mediterranean Region; EUR: Europe; SEAR: South-East Asia Region; WPR: Western Pacific Region

6.1 Regional adjusted prevalence of physical violence perpetrated by household members against girls in the past month, by age of girl



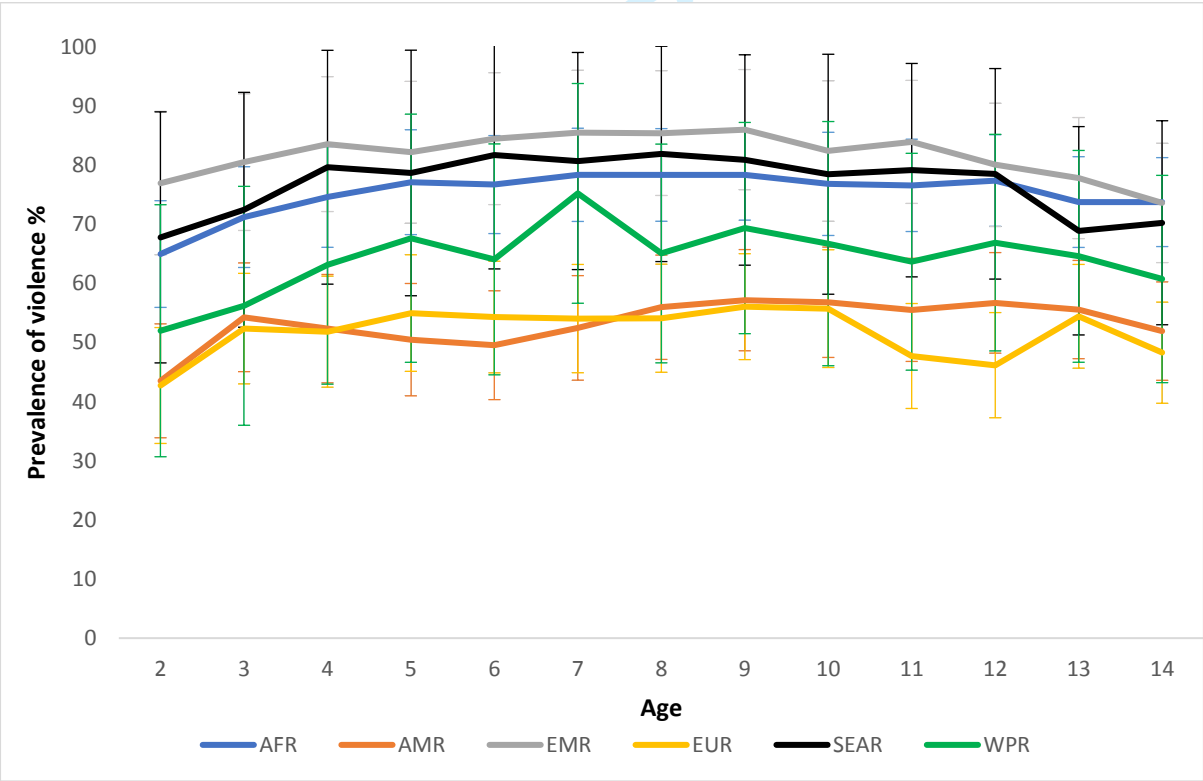
Abbreviations: AFR: Africa; AMR: America; EMR: Eastern-Mediterranean Region; EUR: Europe; SEAR: South-East Asia Region; WPR: Western Pacific Region

6.2 Regional adjusted prevalence of emotional violence perpetrated by household members against boys in the past month, by age of boy



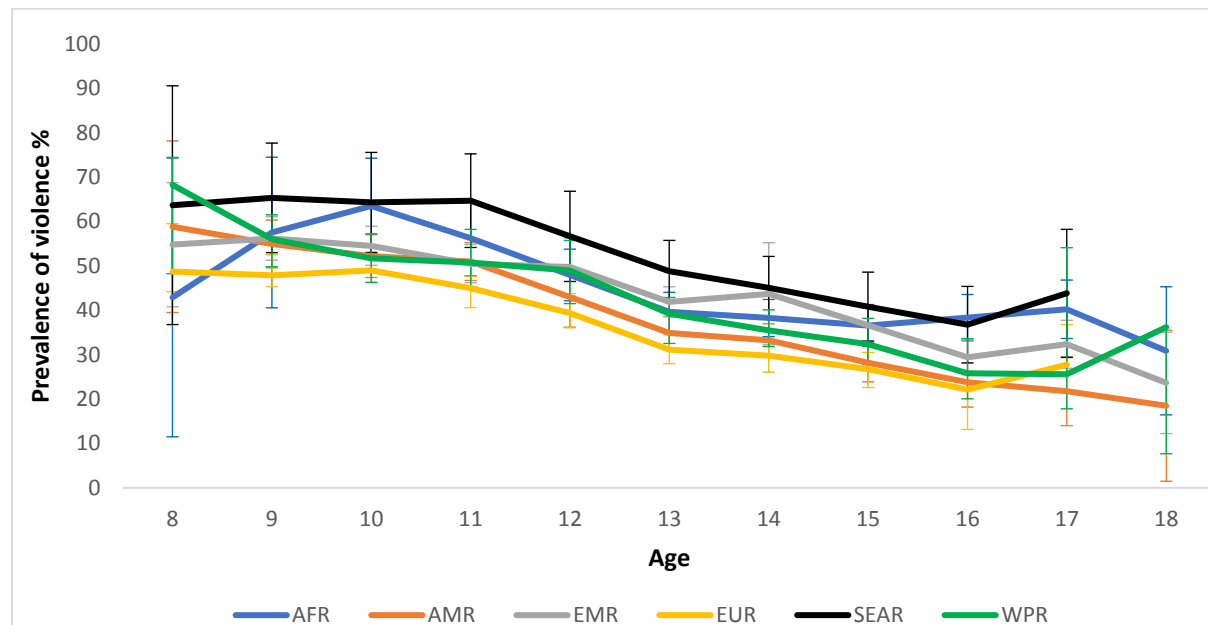
Abbreviations: AFR: Africa; AMR: America; EMR: Eastern-Mediterranean Region; EUR: Europe; SEAR: South-East Asia Region; WPR: Western Pacific Region

6.3 Regional adjusted prevalence of emotional violence perpetrated by household members against girls in the past month, by age of girl



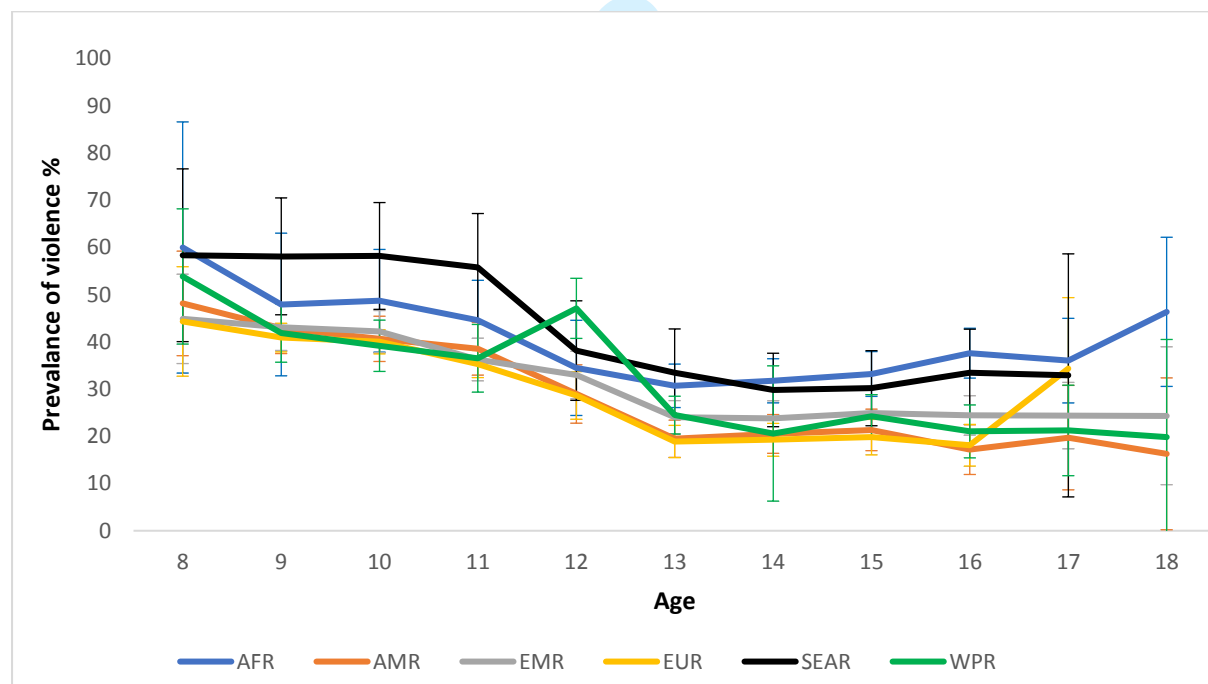
Abbreviations: AFR: Africa; AMR: America; EMR: Eastern-Mediterranean Region; EUR: Europe; SEAR: South-East Asia Region; WPR: Western Pacific Region

6.4 Regional adjusted prevalence of physical violence perpetrated by students against boys in the past 12 months, by age of boy



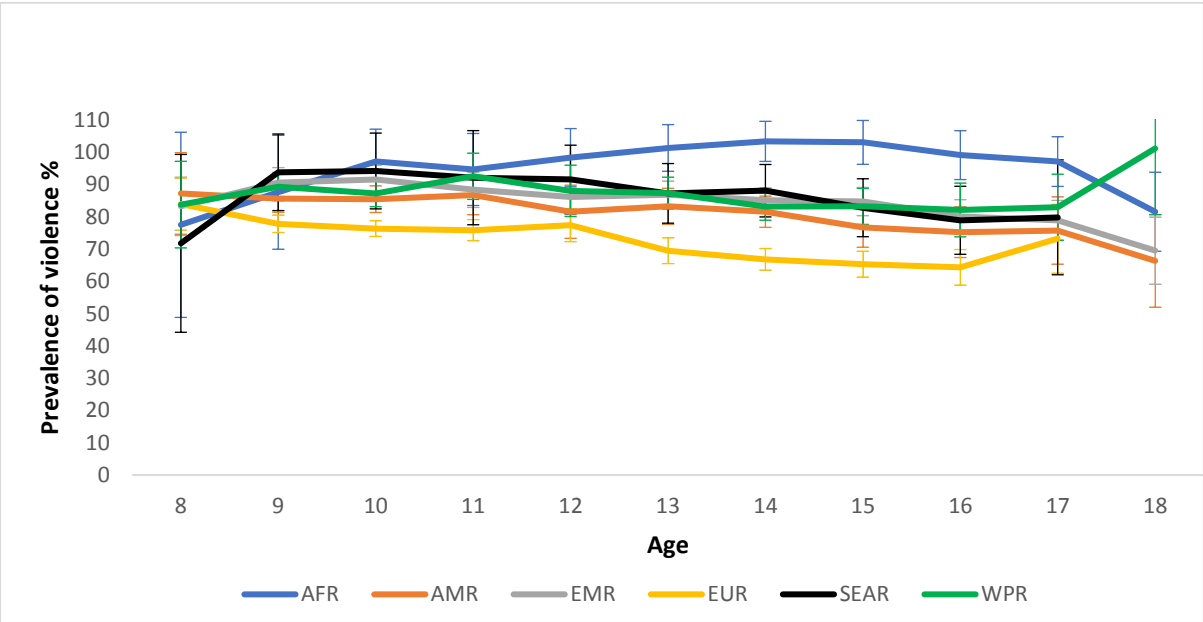
Abbreviations: AFR: Africa; AMR: America; EMR: Eastern-Mediterranean Region; EUR: Europe; SEAR: South-East Asia Region; WPR: Western Pacific Region

6.5 Regional adjusted prevalence of physical violence perpetrated by students against girls in the past 12 months, by age of girl



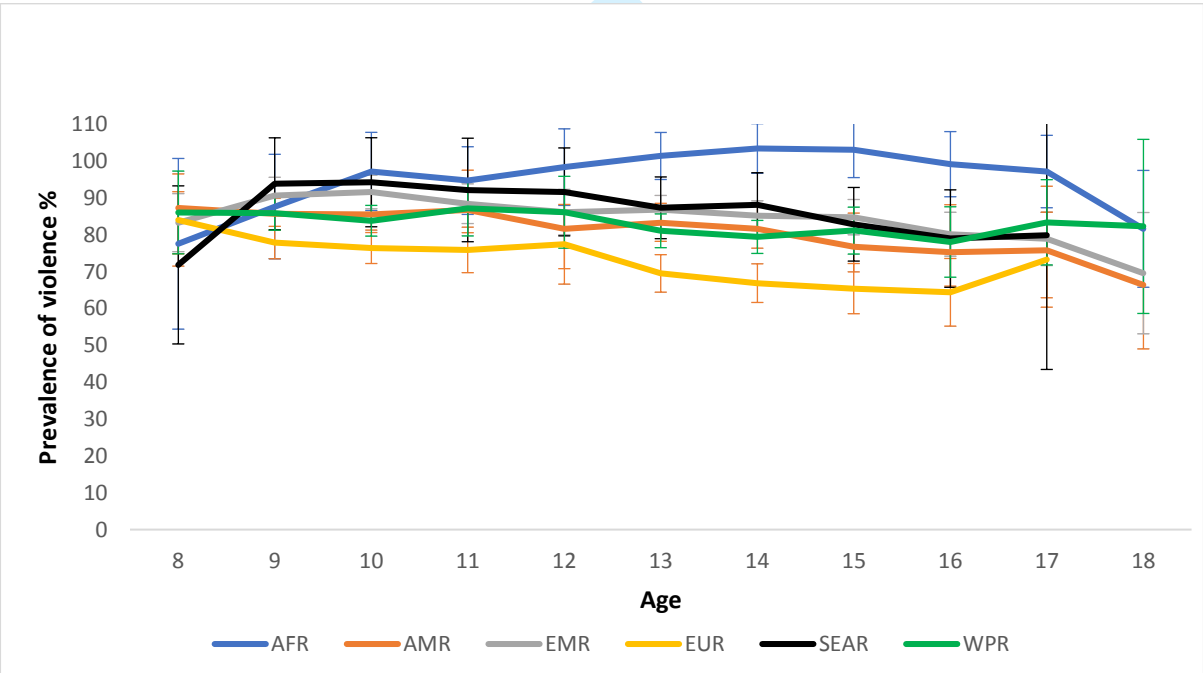
Abbreviations: AFR: Africa; AMR: America; EMR: Eastern-Mediterranean Region; EUR: Europe; SEAR: South-East Asia Region; WPR: Western Pacific Region

6.6 Regional adjusted prevalence of emotional violence perpetrated by students against boys in the past 12 months, by age of boy



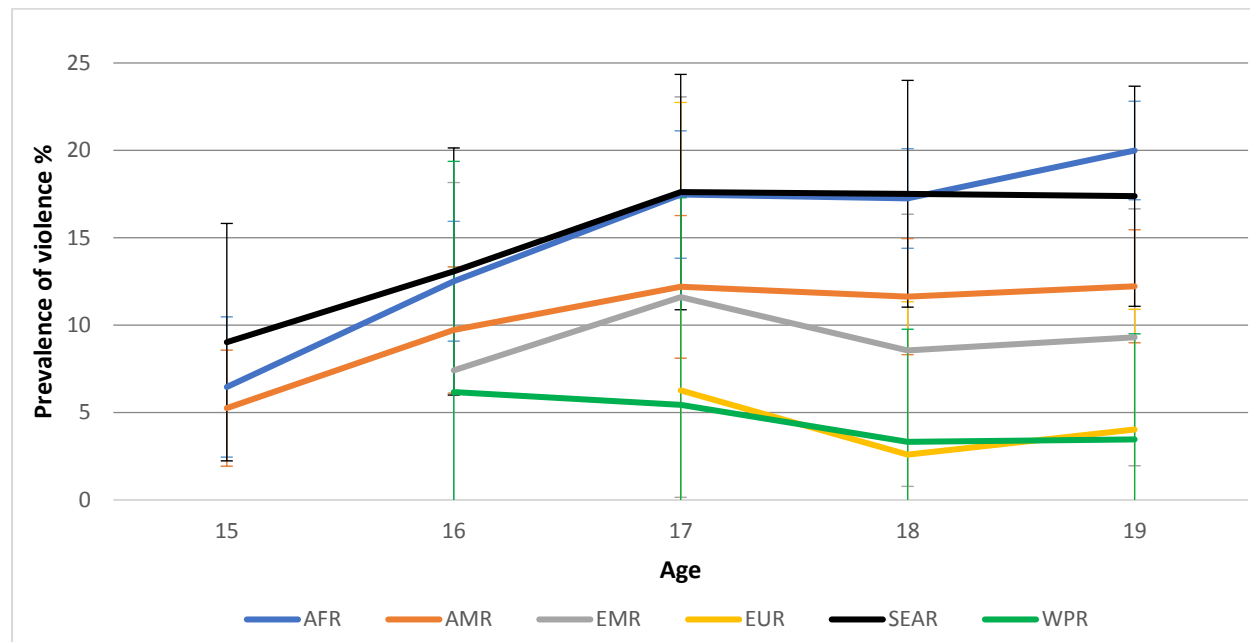
Abbreviations: AFR: Africa; AMR: America; EMR: Eastern-Mediterranean Region; EUR: Europe; SEAR: South-East Asia Region; WPR: Western Pacific Region

6.7 Regional adjusted prevalence of emotional violence perpetrated by students against girls in the past 12 months, by age of girl



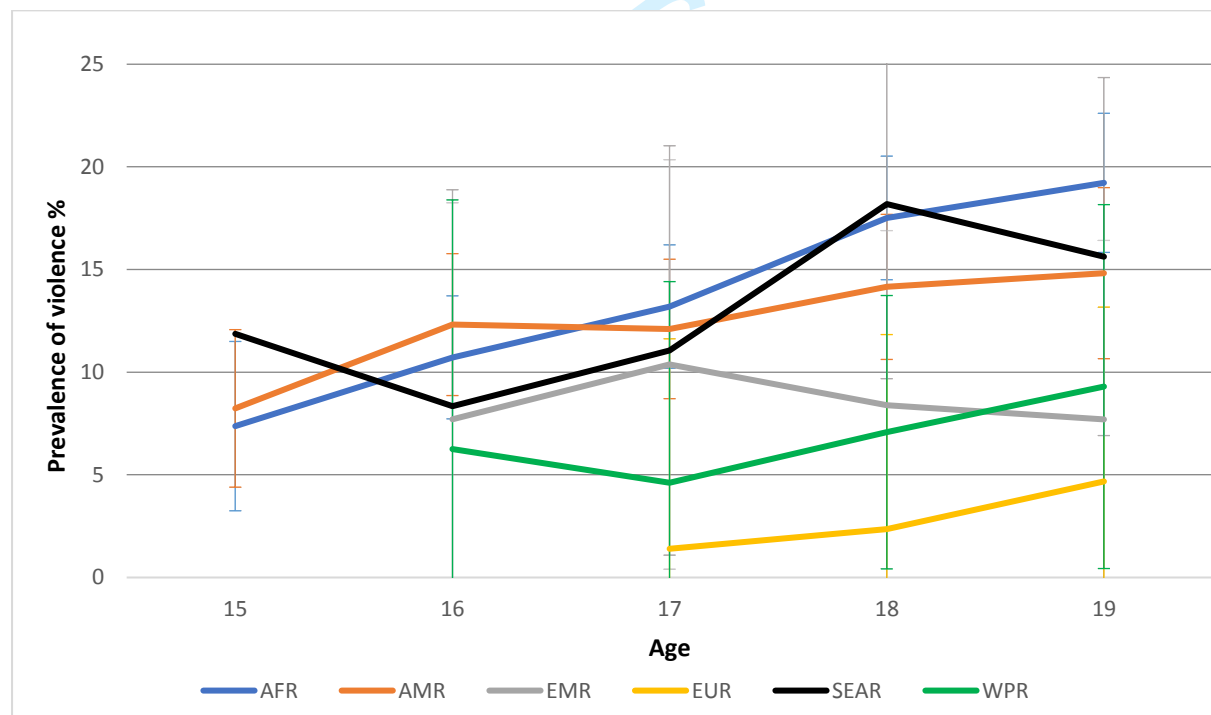
Abbreviations: AFR: Africa; AMR: America; EMR: Eastern-Mediterranean Region; EUR: Europe; SEAR: South-East Asia Region; WPR: Western Pacific Region

6.8 Regional adjusted prevalence of physical violence perpetrated by intimate or dating partners against girls in the past 12 months, by age of girl



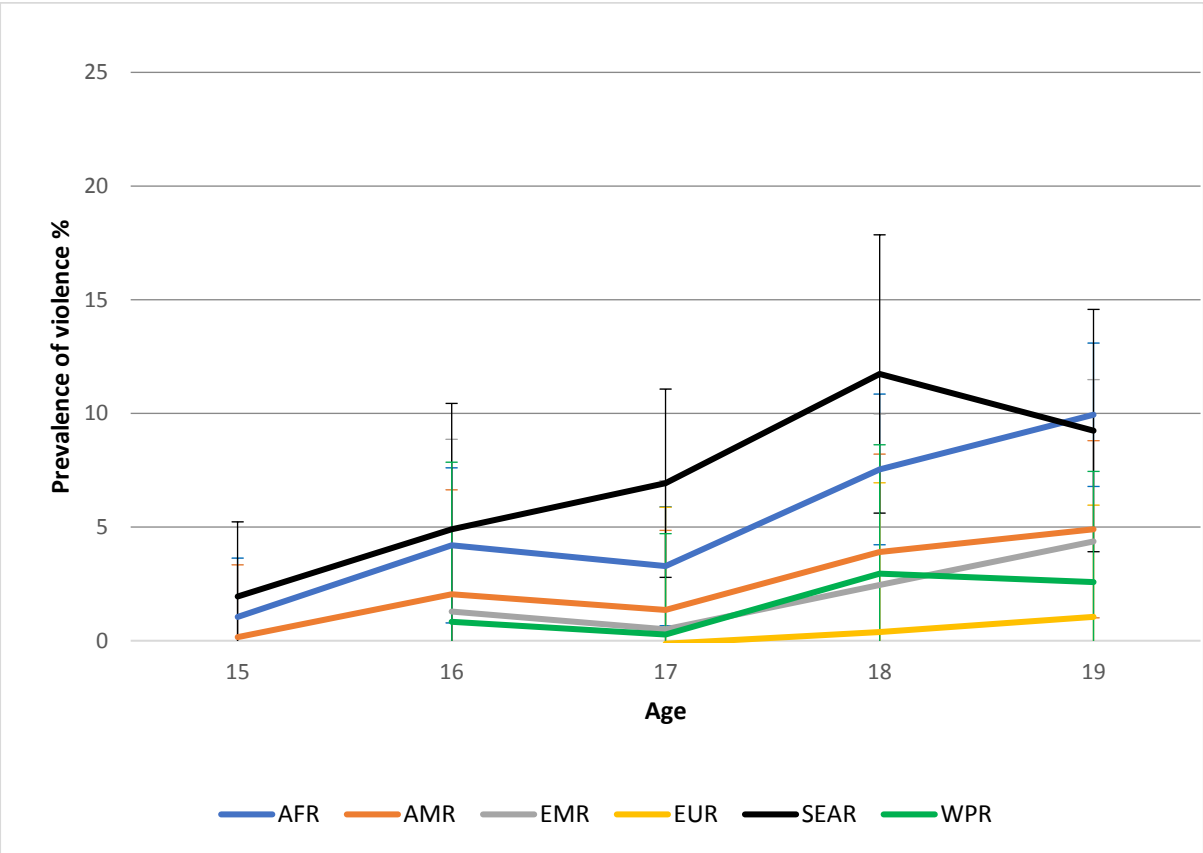
Abbreviations: AFR: Africa; AMR: America; EMR: Eastern-Mediterranean Region; EUR: Europe; SEAR: South-East Asia Region; WPR: Western Pacific Region

6.9 Regional adjusted prevalence of emotional violence perpetrated by intimate or dating partners against girls in the past 12 months, by age of girl



Abbreviations: AFR: Africa; AMR: America; EMR: Eastern-Mediterranean Region; EUR: Europe; SEAR: South-East Asia Region; WPR: Western Pacific Region

6.10 Regional adjusted prevalence of sexual violence perpetrated by intimate or dating partners against girls in the past 12 months, by age of girl



Abbreviations: AFR: Africa; AMR: America; EMR: Eastern-Mediterranean Region; EUR: Europe; SEAR: South-East Asia Region; WPR: Western Pacific Region

Annex 7: Data sources available for prevalence of violence against children estimates

Table 7.0. Number of violence estimates (sexual, physical, emotional or neglect) per WHO region for each dataset source included in the current study

| Source | WHO region | | | | | | Total |
|----------------------|--------------------------|---------------------------|---|---------------------------|---------------------------------------|-------------------------------------|---------------|
| | AFR African region | AMR Americas region | EMR Eastern Mediterranean region | EUR European region | SEAR South- east Asia region | WPR Western Pacific region | |
| DHS | 702 | 303 | 195 | 88 | 59 | 52 | 1,399 |
| RHS | 0 | 116 | 0 | 0 | 0 | 0 | 116 |
| WHO | 40 | 32 | 0 | 4 | 52 | 16 | 144 |
| MICS | 416 | 520 | 208 | 468 | 104 | 104 | 1,820 |
| VACS | 144 | 70 | 0 | 0 | 0 | 0 | 214 |
| GSHS | 394 | 506 | 278 | 236 | 28 | 248 | 1,690 |
| HBSC | 0 | 24 | 0 | 984 | 0 | 0 | 1,008 |
| PIRLS | 84 | 357 | 380 | 1,148 | 48 | 174 | 2,191 |
| TIMSS | 272 | 420 | 1,272 | 1,464 | 118 | 574 | 4,120 |
| GSS | 432 | 0 | 0 | 0 | 0 | 0 | 432 |
| Optimus | 0 | 0 | 0 | 0 | 0 | 152 | 152 |
| EU kids | 0 | 0 | 0 | 400 | 0 | 0 | 400 |
| Systematic review | 3 | 31 | 0 | 86 | 8 | 16 | 144 |
| Total | 2,487 | 2,379 | 2,333 | 4,878 | 417 | 1,336 | 13,830 |

Abbreviations: DHS: Demographic and Health Surveys; RHS: Reproductive Health Surveys; WHO: World Health Organization; MICS: Multiple Indicator Cluster Surveys; VACS: Violence against Children Surveys; GSHS: Global Student Health Surveys; HBSC: Health Behaviour in School-Aged Children; PIRLS: Progress in International Reading Literacy Study; TIMSS: Trends in International Mathematics and Science Study; GSS: Good Schools Study.

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Annex 8. Number of prevalence estimates of violence against children per perpetrator grouping, by form of violence (sexual, emotional, physical, or neglect) and sex of child

Single forms of violence were selected with sex and perpetrator groupings containing an adequate number of estimates to be eligible for meta-regression or meta-analysis, over 50 estimates (dark grey), or identified for presenting un-pooled single estimates in forest plots for groupings of related perpetrators (light grey).

| Perpetrator | Sex | Single form of violence | | | Combined forms of violence | | | | | Total |
|-------------------------------|-------|-------------------------|----------|--------|----------------------------|----------------------------------|--------------------|---------------------------------|---|-------|
| | | Emotional | Physical | Sexual | Physical or emotional | Physical or emotional or neglect | Physical or sexual | Physical or emotional or sexual | Physical or emotional or sexual or witnessing | |
| Any perpetrator | Boys | 19 | 21 | 52 | 19 | 0 | 0 | 0 | 1 | 112 |
| | Girls | 19 | 20 | 66 | 19 | 0 | 0 | 0 | 1 | 125 |
| Adults and authority figures: | | | | | | | | | | |
| Authority figures | Boys | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | Girls | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| Teacher | Boys | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Girls | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| Adult | Boys | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Girls | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Gang or group | Boys | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Girls | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Multiple perpetrators | Boys | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | Girls | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| Rather not say | Boys | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Girls | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| Other | Boys | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Girls | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| Other family member | Boys | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Girls | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |

| Perpetrator | Sex | Single form of violence | | | Combined forms of violence | | | | | Total |
|---|-------|-------------------------|-----------|--------|----------------------------|----------------------------------|--------------------|---------------------------------|---|--------|
| | | Emotional | Physical | Sexual | Physical or emotional | Physical or emotional or neglect | Physical or sexual | Physical or emotional or sexual | Physical or emotional or sexual or witnessing | |
| Partner | Boys | 8 | 23 | 8 | 0 | 0 | 0 | 0 | 0 | 39 |
| | Girls | 317 | 348 | 329 | 3 | 0 | 48 | 271 | 0 | 1,316 |
| Peers | Boys | 1 | 0 | 0 | 226 | 0 | 0 | 0 | 0 | 227 |
| | Girls | 1 | 1 | 0 | 226 | 0 | 0 | 0 | 0 | 228 |
| Student | Boys | 1,555 (1) | 2,173 (2) | 16 | 895 | 0 | 0 | 0 | 0 | 4,639 |
| | Girls | 1,507 (1) | 2,108 (2) | 16 | 879 | 0 | 0 | 0 | 0 | 4,510 |
| Caregiver/ parent/ household member (3) | Boys | 561 | 589 | 8 | 0 | 19 | 0 | 0 | 0 | 1,177 |
| | Girls | 561 | 589 | 8 | 0 | 19 | 0 | 0 | 0 | 1,177 |
| Total | Boys | 2,176 | 2,882 | 116 | 1,140 | 19 | 0 | 0 | 1 | 6,334 |
| Total | Girls | 2,437 | 3,142 | 451 | 1,127 | 19 | 48 | 271 | 1 | 7,496 |
| Total | | 4,613 | 6,024 | 567 | 2,267 | 38 | 48 | 271 | 2 | 13,830 |

(1) Emotional cyber bullying was not included in regression models estimating emotional violence perpetrated by students against other students (252 boy and 252 girl estimates).

(2) Separate estimates for boy-student perpetrators and girl-student perpetrators were not included in meta-regression models presented that estimate prevalence from any student (48 boy- and 48 girl-student perpetrator estimates were provided).

(3) Adult proxy reports of violence from household members and children's self-reports of violence from caregiver, parent or household member were analysed separately in meta-regression and meta-analysis, respectively.

Annex 9. Children’s self-reports of violence perpetrated by caregivers, by age of child, data source, and country.

Figure 9.0. Prevalence of physical violence perpetrated by caregivers against girls, in the past 12 months (based on self-report)

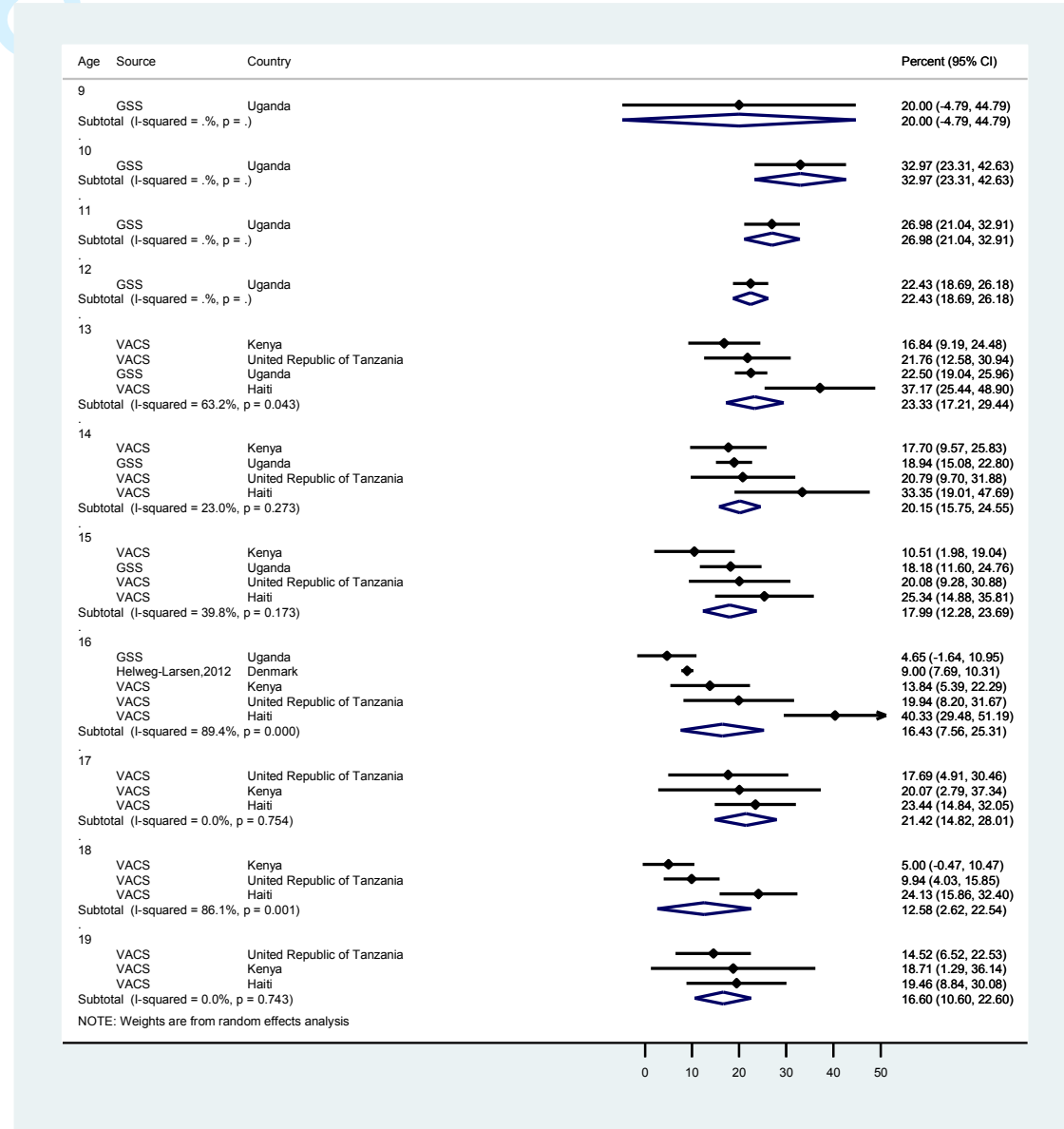


Figure 9.1. Prevalence of physical violence perpetrated by caregivers against boys, in the past 12 months (based on self-report)

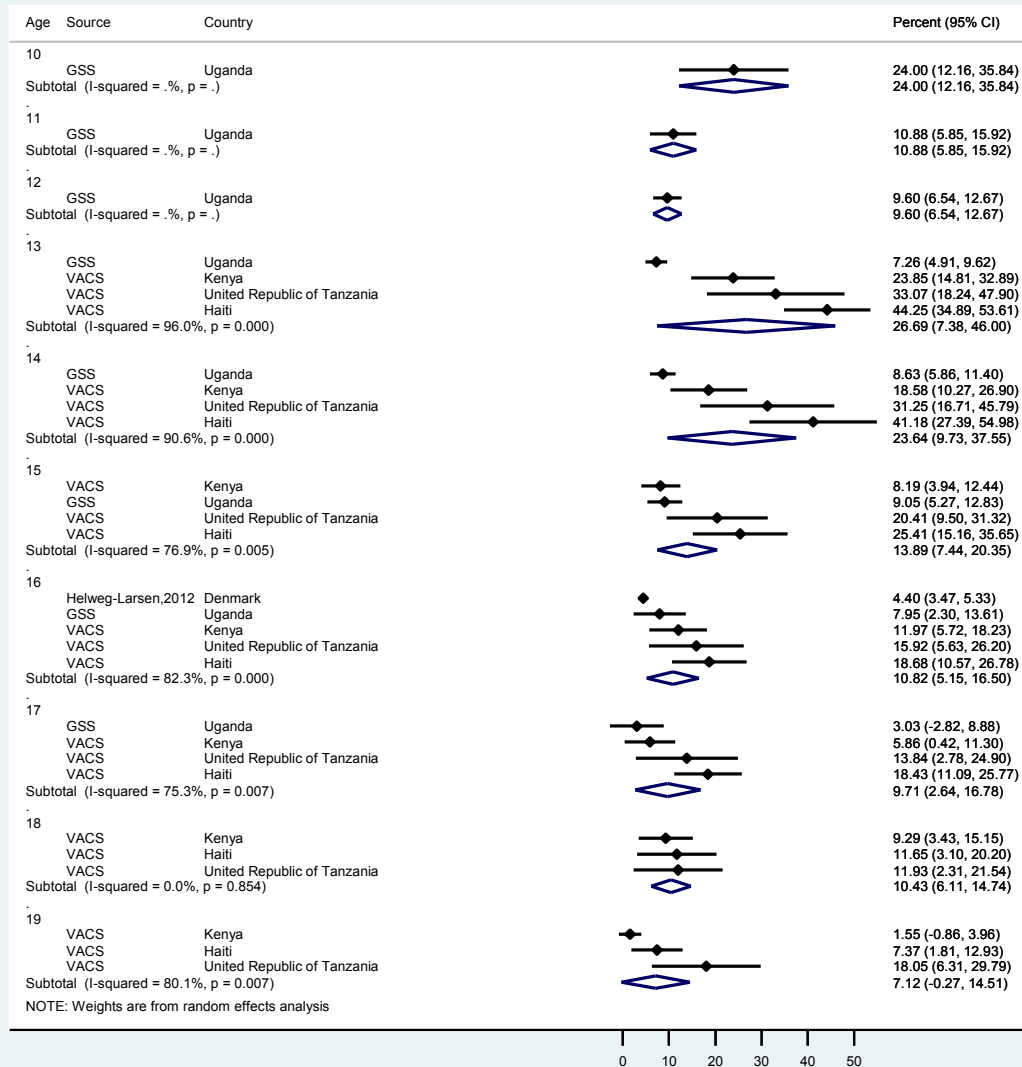


Figure 9.2. Prevalence of emotional violence perpetrated by caregivers against girls, in the past 12 months (based on self-report)

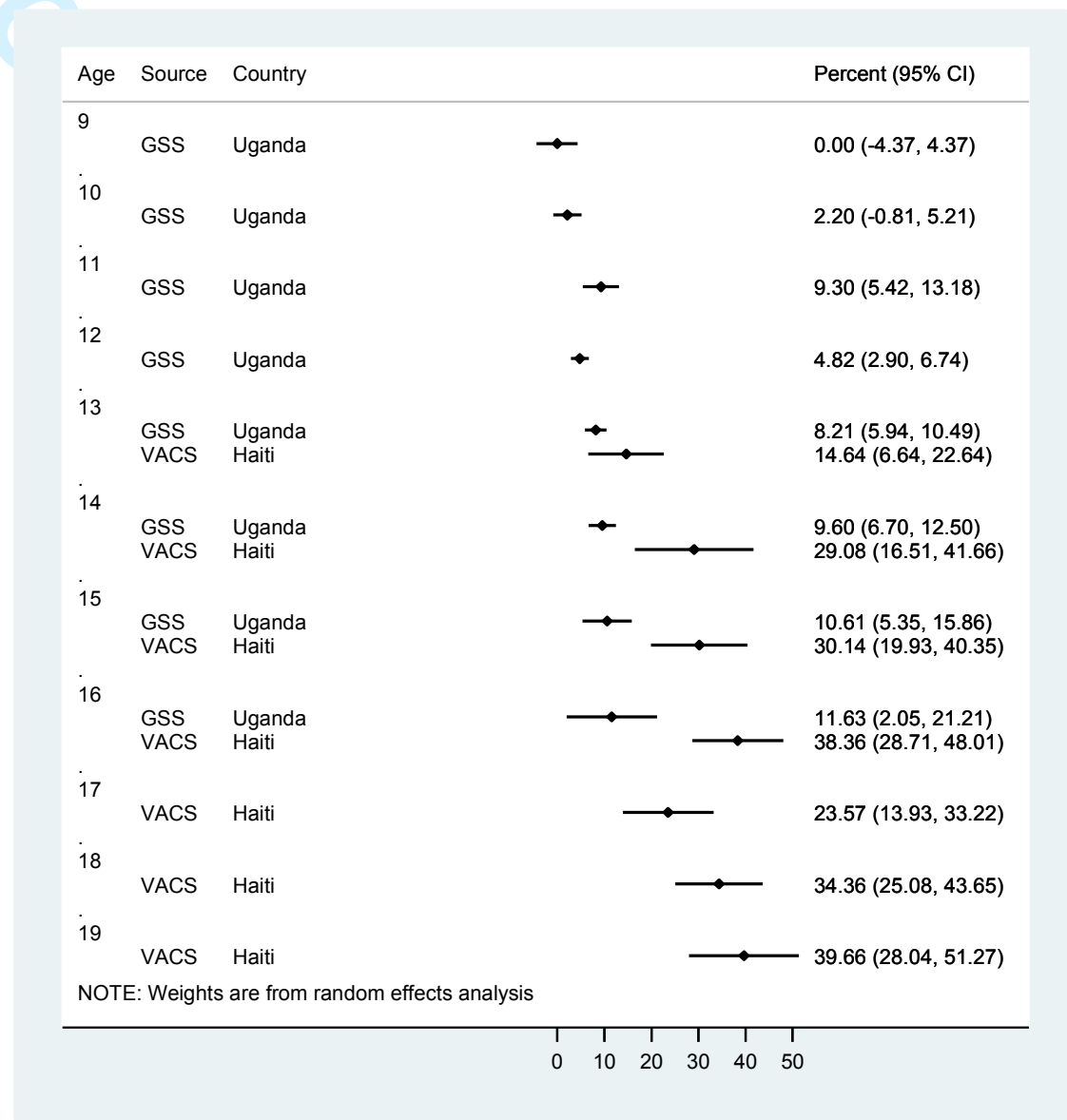
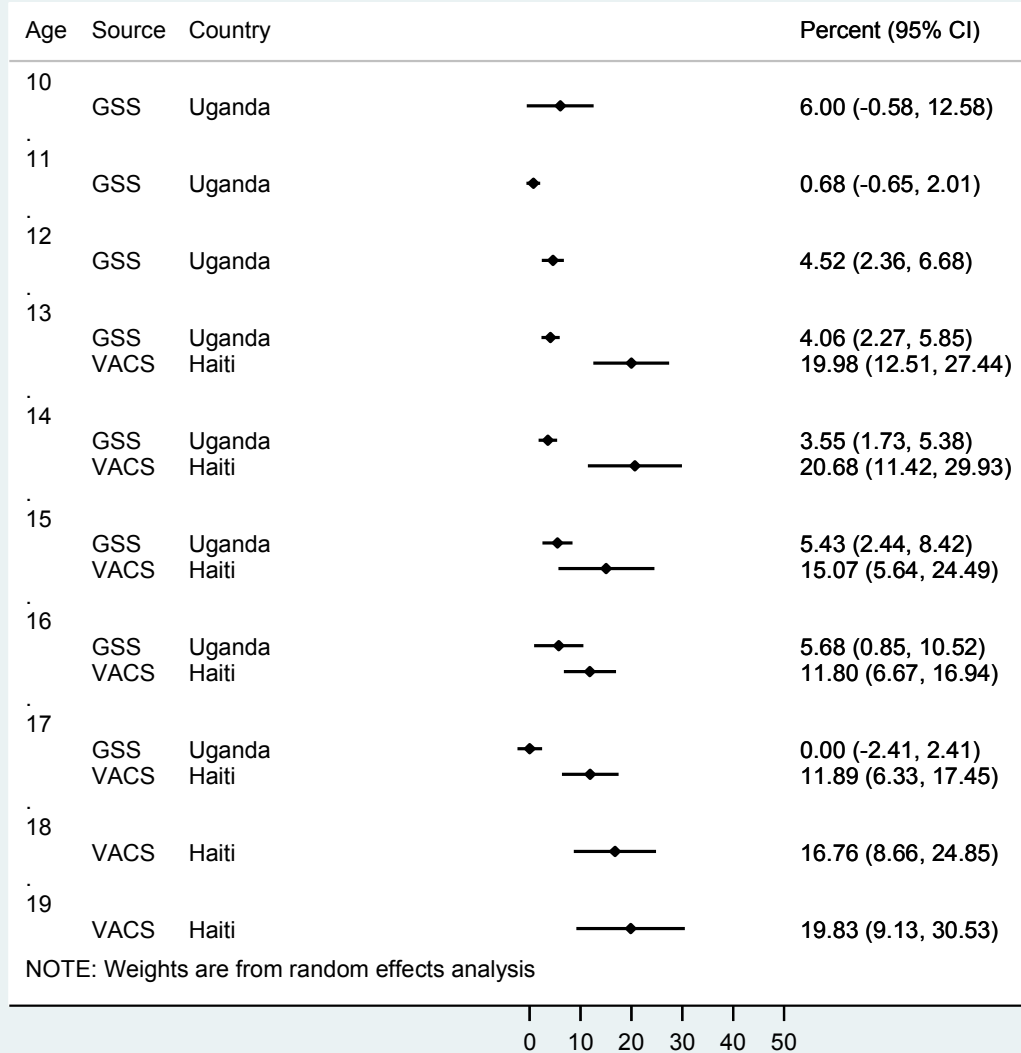


Figure 9.3. Prevalence of emotional violence perpetrated by caregivers against boys, in the past 12 months (based on self-report)



BMJ Paediatrics Open

Who perpetrates violence against children? A systematic analysis of age and sex specific data

| | |
|-------------------------------|--|
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| Keywords: | Epidemiology, Adolescent Health, Child Abuse, Children's Rights, School Health |
| | |

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Who perpetrates violence against children? A systematic analysis of age and sex specific data

Authors: Karen Devries, Louise Knight, Max Petzold, Katherine G Merrill, Lauren Maxwell, Abigail Williams, Claudia Cappa, Ko Ling Chan, Claudia Garcia-Moreno, NaTasha Hollis, Howard Kress, Amber Peterman, Sophie D Walsh, Sunita Kishor, Alessandra Guedes, Sarah Bott, Betzabé Butrón, Charlotte Watts, Naeemah Abrahams

London School of Hygiene & Tropical Medicine, London, WC1E 7HT, UK: Karen Devries Associate Professor, Louise Knight Research Fellow and Charlotte Watts Professor. Health Metrics at Sahlgrenska Academy, PO Box 414, University of Gothenburg, 405 30 Gothenburg, Sweden: Max Petzold Professor. Johns Hopkins University, Baltimore, MD 21218, USA: Katherine G Merrill PhD Candidate. McGill University, Montréal, QC H3A 0G4, Canada: Lauren Maxwell PhD Candidate. Brunel University, Uxbridge UB8 3PH, UK: Abigail Williams BSc student. UNICEF, Data and Analytics Section, Division of Data, Research and Policy, New York, NY 10017, USA: Claudia Cappa Statistics Specialist. Department of Applied Social Sciences, The Hong Kong Polytechnic University, Hong Kong, China, Ko Ling Chan Professor. World Health Organization, Switzerland, Claudia Garcia-Moreno. US Centers for Disease Control, USA, NaTasha Hollis Epidemiologist and Howard Kress team lead for the Violence Against Children and Youth team. UNICEF Office of Research—Innocenti, Piazza SS. Annunziata 12, 50122 Florence, Italy: Amber Peterman Social Policy Specialist. Bar-Ilan University, Israel: Sophie D Walsh Clinical Psychologist and Associate Professor. ICF, The DHS Program, USA: Sunita Kishor Director of the Demographic and Health Surveys (DHS) Program. Pan-American Health Organization, USA: Alessandra Guedes Regional Adviser on Intra-Family Violence and Betzabé Butrón, Regional advisor on child health and Sarah Bott Independent Consultant. South African Medical Research Council, South Africa: Naeemah Abrahams Deputy Director of the Gender and Health Research Unit, South African Medical Research Council P O Box 19070 Tygerberg 7405 Cape Town South Africa.

Corresponding author: Louise Knight email: Louise.knight@lshtm.ac.uk Tel: 0207 612 7908

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Keywords: violence against children, child abuse, intimate partner violence, bullying, school violence

Reference count: 29

Author contributions:

Karen Devries designed the study, conducted data analysis, drafted the manuscript, and obtained funding. Louise Knight input into the design of the study, conducted data analysis, performed the overall data synthesis, and drafted the graphics and annexes. Max Petzold provided input into the statistical methods and data synthesis, and conducted data analysis. Kate Merrill and Lauren Maxwell conducted the systematic review, and conducted data analysis. Abigail Williams assisted with the systematic review. Claudia Cappa, Edward Chan, Natasha Hollis, Howard Kress, Amber Peterman, Sophie D Walsh, Claudia Garcia-Moreno and Sunita Kishor contributed and/or analysed data. Charlotte Watts obtained funding. Naeemah Abrahams and Charlotte Watts input into the design of the study. All authors input into the writing of the manuscript and approve of its contents. The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention or other affiliated institutions.

Declaration of interests:

All authors declare that they have no conflict of interest.

Acknowledgements:

We gratefully acknowledge all the children and adolescents who participated in the original studies and surveys used in this global systematic review.

Role of funding source:

No funding sources were involved gathering of data or analysis for this study, but representatives of the Pan-American Health Organisation (A. Guedes and B. Butrón) input into the writing of the manuscript and are included as authors. Karen Devries had full access to all of the data in the study and had final responsibility for the decision to submit for publication.

Abstract:

Objective: We produced the firstage and sex specific prevalence estimates by perpetrator type for physical, sexual and emotional violence against children globally.

Design: We used random effects meta-regression to estimate prevalence.. Estimates were adjusted for relevant quality covariates, variation in definitions of violence and weighted by region, age and sex specific population data to ensure estimates reflect country population structures.

Data Sources: Secondary data from 600 population or school-based representative datasets and 43 publications obtained via systematic literature review, representing 13,830 estimates from 171 countries.

Eligibility criteria for selecting studies: Estimates for recent violence against children aged zero to 19 were included.

Results: The most common perpetrators of physical and emotional violence for both boys and girls across a range of ages are household members, with prevalence often surpassing 50%, followed by student peers. Children reported experiencing more emotional than physical violence from both household members and students. For children attending school, emotional violence from other students is more common than emotional violence from household members. The most common perpetrators of sexual violence against girls aged 15 to 19 years are intimate partners, however few data on other perpetrators of sexual violence against children are systematically collected internationally. Few age- and sex-specific data are available on violence perpetration by schoolteachers, however existing data indicate high prevalence of physical violence from teachers towards students. Data from other authority figures, strangers, siblings and other adults are limited, as are data on neglect of children.

Conclusions: Without further investment in data generation on violence exposure from multiple perpetrators for boys and girls of all ages,progress towards Sustainable Development Goals 4, 5 and 16 may be slow. Despite data gaps, evidence shows violence from household members, peers in school and for girls, from intimate partners, should be prioritised for prevention.

Words: 362

Systematic review registration: PROSPERO 2015:CRD42015024315

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What is already known on this subject

Previous large-scale studies synthesizing global violence data have estimated the proportion of the population who experience violence at any time during 'childhood', adolescence or over the past year. However, the basic epidemiology and patterning of different forms of violence by different perpetrators, are likely to differ vastly by both sex and specific age. Age-, sex- and perpetrator-specific prevalence estimates of violence against children are not comprehensively available.

What this study adds

We combine estimates from 600 datasets and 44 publications representing 171 countries and 13,830 separate age- and sex- specific data on the prevalence of recent physical, sexual and emotional violence according to perpetrator, making this the most comprehensive such synthesis to date. Estimates based on available data suggest that the most common perpetrators of physical and emotional violence for both boys and girls across a range of ages are household members, followed by peers in school, and that the most common perpetrators of sexual violence against girls aged 15 to 19 years are intimate partners. However, few data on sexual violence exist on other age groups or for boys. Efforts to enhance current data collection and analysis are required to measure progress towards the Sustainable Development Goals pertaining to reduction in childhood violence.

INTRODUCTION

Globally, levels of violence against children are worryingly high. More than 50% of children report experiencing some form of physical, sexual, emotional violence or neglect in the past year[1], and global meta-analyses suggest that about 10% of boys and 20% of girls have experienced sexual violence in their lifetime[2, 3]. Violence during childhood has a negative impact on brain development[4, 5], and well-documented adverse health and social consequences, including increased risk of later mental health disorders, sexually transmitted infection, substance use, obesity, poor academic outcomes and psychosocial well-being[6-10]. Since the landmark world report on violence against children[11], this issue has increasingly become the focus of global aid and policy agendas. Commitments to reduce violence in childhood now feature in Sustainable Development Goals (SDGs) 4, 5 and 16.

Previous large-scale studies synthesizing global violence data have estimated the proportion of the population who experience violence at any time during childhood [2, 3], during adolescence[12] and more recently, over the past year[1]. However, the epidemiology of violence is likely to differ by age and sex. The aims of this paper are to synthesise information on: 1) the gaps in data on physical, sexual and emotional violence and neglect by age, sex, and geographical region; and 2) the prevalence of past-year physical, sexual and emotional violence and neglect against male and female children and adolescents, at each age from 0-19 years, by perpetrator.

Given the variations in the definitions and meanings of violence across contexts, we purposively take a broad view, including acts which may be framed as aggression, abuse and discipline to varying degrees in different contexts (Box 1). We build on previous synthesis efforts[1, 13] by examining data coverage and prevalence by sex at each individual year of age from 0 to 19 years, rather than across broad age categories. Other forms of violence, including exploitation and human trafficking, are outside the scope of our review.

Box 1. Defining violence

What is considered violence, abuse, punishment, aggression, and discipline can differ considerably across countries, by the nature of the relationship between people who are using or experiencing different acts of physical, sexual and emotional behaviours, and across time. In this paper, we include acts which are measured in the context of survey modules asking parents about disciplining their children, asking students about fighting with their peers, and asking adolescents about their experiences in intimate partnerships, amongst other measures. Within each of these relationships, there will be a heterogeneity of different power arrangements. Some argue that abuse of power is central to defining different physical, sexual and emotional acts as ‘violence’, and others may argue that inherent in each of these dyads are unequal power relationships which mean that a range of acts can be classified as ‘violence’. Similarly, what might be framed as a ‘discipline practice’ (and therefore, as more acceptable) in one context at one time (for example, hitting children on the buttocks with stick), might be framed as ‘violence’ (and therefore less acceptable) in that same context at a different time. We acknowledge that differing levels of acceptability of violence may influence reporting of prevalence. However, there is clear evidence that exposure to different acts of physical, sexual and emotional violence has adverse health and developmental outcomes. In this paper, we take a broad view, and include a wide range of acts which could have adverse consequences ranging from severe to none. It is important to recognise however that many of these acts will not be seen as ‘violence’ or ‘abuse’ (that is, they will be seen as acceptable) by different groups in different countries.

METHODS

We performed secondary analysis of existing international datasets and a systematic review of published and grey literature. Our protocol is registered in PROSPERO 2015:CRD42015024315.

Data from large datasets. All relevant international datasets (where the same survey methodology was used in more than one country) known to the authorship team were eligible for inclusion. We analysed data from the Demographic and Health Surveys (DHS, 44 countries); the Multiple Indicator Cluster Surveys (MICS, 35 countries); the WHO Multi-Country Study on Women's Health and Domestic Violence Against Women (WHO MCS, 11 countries); the Reproductive Health Surveys (RHS, 6 countries); the Global Student Health Surveys (GSHS, 78 countries); the Health Behaviour in School-Aged Children (HBSC, 39 countries); the Violence Against Children Surveys (VACS, 4 countries); EU Kids Online (25 countries); Progress in International Reading Literacy Study (PIRLS, 46 countries); Trends in International Mathematics and Science Study (TIMSS, 69 countries); and combined TIMSS/PIRLS surveys (33 countries). We also included data from the UBS Optimus study in China and the Good Schools Study in Uganda. Estimates for age- and sex-specific prevalence of different forms of violence, and perpetrators of violence (where applicable) were produced, accounting for the complex sampling scheme employed in each survey. These estimates were combined with data extracted from studies identified via the systematic review. We could not obtain data from the Balkan Epidemiological Study on Child Abuse and Neglect (BECAN).

Systematic review. Database search strategy. We searched the following databases from first record to 7 December 2015: MEDLINE, EMBASE, PsycINFO, and Global Health. Controlled vocabularies of each database were used to tailor search terms; for example, MeSH terms for MEDLINE. Search terms included words related to violence and maltreatment, children, and study filters to identify observational studies and trials which might have survey data (further described in Annex 1). There were no restrictions on language or year of publication and therefore data is represented up to December 2015.

Inclusion criteria. Studies reporting on the prevalence of physical, sexual and emotional violence, and neglect, as well as perpetrators of various forms of violence against children aged 0-19 years, were considered for inclusion. We also included studies reporting on witnessing domestic or intimate partner violence. All author definitions of these forms of violence, and of perpetrator, were accepted. Only studies using a survey methodology to gather data from participants sampled to represent a geographic area, or school-based populations of young people, were considered. Self-reports on experience of violence were included, and studies using proxy reports for younger children were included (for example, the MICS, which gathers parent's and household members reports of their use of psychological and physical aggression against children aged 2-14 years). Only studies in which reports of violence were over a narrow age range (5 years or less) were included in meta-regressions; most estimates were specific to children at each single year of age. Similarly, most studies had a recall period of one year, but those with recall periods below one year were also included in meta-regressions. In the partner violence meta-regression one estimate had a recall period of 18 months, which was included and adjusted for in analysis.

Screening and Data extraction. Screening of abstracts and full text articles was performed by KM, LM, and AW. KM performed initial screening to remove irrelevant titles. Due to the volume of results, double screening of abstracts was not employed. Instead, KM, LM and AW screened a subset of 150 articles together using standardised inclusion criteria, discussing application of the criteria until consistency was reached. Remaining abstract screening was done by one reviewer. Data on study characteristics and quality were extracted by KM or LM, into a customised Google form database created by LM. KM and LM discussed any questions on a weekly basis. Definitions of violence varied considerably across studies, and each definition was recorded in detail.

Quality appraisal. We describe the quality of estimates and considered the following characteristics to be higher quality: whether studies were nationally representative versus representative of a smaller geographic area, since prevalence may differ within geographical areas within a country); whether study questions ask about specific behavioural acts of violence (versus generic ‘violence’ exposure, because the former avoids participants’ subjective decisions about what constitutes ‘violence’); whether multiple items were used to assess exposure to violence (versus single items because asking about multiple specific acts will yield more accurate prevalence estimates); whether an anonymous disclosure method was used, versus a face to face interview, was described, because anonymous methods tend to produce more disclosures[14]; and whether children were able to self-report (versus a proxy report was relied upon). Children’s own reports may be increasingly accurate as they age, especially for more hidden or stigmatising forms of violence. However, very young children may not remember all of the violence they have experienced; in which case proxy reports may be more reliable. We described whether interviewers were trained on violence (versus not, as more interviewer training results in higher levels of disclosure in studies on violence against women); and whether the study was specifically about violence or maltreatment exposure (versus another topic, as studies which intend to measure violence are likely to differ from general studies on a number of quality criteria). Participation rates and levels of missing data are also described.

Data synthesis. Data from the systematic review and dataset analyses were combined. We describe overall coverage of data by geographic region, sex, age, perpetrator category, and form of violence (Tables 1 and 2). Where studies have not reported prevalence as a percentage or proportion with a standard error or 95% confidence interval, we calculated these based on data provided in reports or via contact with authors where possible. Estimates from groups of fewer than 10 participants were excluded.

Where the number of sex-specific prevalence estimates per perpetrator for a given form of violence was greater than 50, we performed random effects meta-regressions[15] (using the metan command in Stata 14) to estimate the prevalence of exposure to violence for each sex and year of age. Unadjusted estimates are presented in Annex 2. Covariates for each regression model are described in Annex 4. Estimates were adjusted for relevant quality covariates and also by definitions of violence such that overall estimates would reflect higher quality studies with the ‘best’ definition, for example measures that include more specific acts of violence. Details of data sources and definitions of violence for each meta-regression model are specified in Annex 3. Estimates were then weighted by WHO region age- and sex-specific population data to ensure overall estimates would be reflective of country population structures. The mean estimate and 95% confidence interval (CI) for each age are plotted separately in bar graphs (Figures 2-4). In cases where a given age had fewer than 10 estimates, unadjusted estimates from meta-analysis[16] are presented in the same bar graphs (noted in footnotes) as estimates from meta-regressions. These are unadjusted for country-population age structures and should not be interpreted as globally representative. Prevalence figures and confidence intervals for each age specific estimate presented from meta-regression in figures are in Annex 5.

Where the number of prevalence estimates per perpetrator (over all age and sex categories) for a given form of violence was fewer than 25, we display estimates on a forest plot separately by age, and did not attempt to quantitatively synthesise them.

Most studies reported violence exposure over a one-year age range. Where studies reported violence over a larger age range, we took the midpoint of the age range and assumed the prevalence pertained to that age (for example, for a sample 15-17 year olds reporting only an average prevalence, we modelled as the prevalence at age 16 years). For studies where the recall period was below one year, we counted that prevalence as past-year prevalence.

Our goal is to understand who the most common perpetrators of violence by age and sex in the whole population are, and therefore to compare prevalence across groups with different denominators. This required us to adjust estimates on school violence from school-based surveys, and intimate partner violence from ever-partnered young people, as not all young people attend school or are in intimate relationships (and therefore by definition are not exposed to these forms of violence). Estimates provided with students as the denominator were adjusted by the WHO regional estimation proportion of students attending primary and secondary schools[17]. Estimates provided with the ever-partnered proportion of the survey population as the denominator were adjusted by the proportion of country populations which had ever had sex by age 20 years (using DHS data[18]), to make them reflect the prevalence of different forms of partner violence in the entire population (rather than only the ever-partnered population).

Patient involvement

Some of the original studies or surveys used in this review do routinely share results with children participants, namely HBSC surveys. We thank all participants involved in the original studies and surveys in the acknowledgements section of this paper. No children or adolescents were involved in setting the research question, design or the outcome measures, nor were they involved in interpretation or writing up of results of this paper. This paper was produced as part of the kNow Violence in Childhood initiative, which disseminates results from the larger initiative to children and adolescents.

RESULTS

Data coverage

In total, we retrieved 643 studies from 171 countries, containing 13,830 separate age- and sex-specific prevalence estimates (Figure 1).

<<Figure 1>>

Overall availability of estimates is described in Table 1. Europe had substantially more data which met our inclusion criteria compared to other regions, and the South-East Asia Region had very few estimates compared to other regions. Physical violence was most commonly reported in an age- and sex-specific way, followed by emotional violence. Far fewer estimates were available for sexual violence, and no estimates for neglect or witnessing intimate partner violence were age- and sex-specific.

Table 1. Data coverage of prevalence estimates of violence against children

| | Number of estimates | Number of Countries | Number of Studies |
|--|---------------------|---------------------|-------------------|
| Total | 13830 | 171 | 643 |
| Sex | | | |
| Male | 6334 | 154 | 609 |
| Female | 7496 | 151 | 643 |
| Form of violence | | | |
| Emotional | 4613 | 14 | 418 |
| Physical | 6024 | 170 | 591 |
| Sexual | 567 | 57 | 72 |
| Neglect | 0 | 0 | 0 |
| Witnessing IPV | 0 | 0 | 0 |
| Physical/emotional | 2267 | 123 | 243 |
| Physical/emotional/neglect | 38 | 1 | 1 |
| Physical/emotional/sexual | 271 | 45 | 45 |
| Physical/sexual | 48 | 13 | 14 |
| Physical/emotional/sexual/witnessing | 2 | 1 | 1 |
| Region (WHO) | | | |
| African region | 2,487 | 34 | 75 |
| Americas region | 2,379 | 36 | 93 |
| Eastern Mediterranean region | 2,333 | 20 | 91 |
| European region | 4,878 | 52 | 289 |
| South-east Asia region | 417 | 8 | 23 |
| Western Pacific region | 1,336 | 20 | 72 |
| Main perpetrator groupings | | | |
| Parent/Caregiver/ Household member | 2354 | 48 | 49 |
| Student | 9149 | 136 | 484 |
| Peer (any peers either from school, home, other) | 455 | 27 | 312 |
| Boyfriend/Girlfriend/Intimate partner | 1355 | 54 | 69 |
| Teacher | 48 | 1 | 1 |
| Stranger | 0 | 0 | 0 |
| Adult | 2 | 1 | 1 |
| Authority figures | 42 | 3 | 3 |
| Any perpetrator | 237 | 17 | 24 |
| Other | 188 | 5 | 5 |
| Included in meta regression | | | |
| Physical violence from students, boys | 2157 | 134 | 471 |
| Physical violence from students, girls | 2092 | 134 | 471 |
| Physical violence from household members (proxy reports), boys | 559 | 43 | 43 |
| Physical violence from household members (proxy reports), girls | 559 | 43 | 43 |
| Physical violence from intimate partners, girls | 341 | 47 | 58 |
| Emotional violence from students, boys | 1287 | 82 | 309 |
| Emotional violence from students, girls | 1239 | 82 | 309 |
| Emotional violence from household members (proxy reports), boys | 546 | 43 | 44 |
| Emotional violence from household members (proxy reports), girls | 546 | 43 | 44 |
| Emotional violence from intimate partners, girls | 311 | 45 | 50 |
| Sexual violence from intimate partners, girls | 323 | 45 | 53 |

| | | | |
|--|----|---|---|
| Included in meta-analysis | | | |
| Physical violence from authority figures, boys | 30 | 5 | 5 |
| Physical violence from authority figures, girls | 30 | 5 | 5 |
| Physical violence from caregivers (child self-reports), boys | 30 | 5 | 5 |
| Physical violence from caregivers (child self-reports), girls | 30 | 5 | 5 |
| Emotional violence from caregivers (child self-reports), boys | 15 | 2 | 2 |
| Emotional violence from caregivers (child self-reports), girls | 15 | 2 | 2 |
| Not presented in this paper | | | |
| Sexual violence from any perpetrator, girls | 66 | 8 | 8 |
| Sexual violence from any perpetrator, boys | 52 | 8 | 8 |

Breaking down the number of available estimates by sex and perpetrator (Table 1), the most commonly measured forms of violence were physical and emotional violence from students towards other male and female students, followed by physical and emotional violence from caregivers towards boys and girls, followed by intimate partner violence against girls, and then physical violence against boys and girls from 'authority figures'. There were too few estimates on forms of violence perpetrated by strangers, teachers, other adults, or from overall categories of 'any perpetrator' (that is, from all perpetrators combined), to compute overall prevalence figures, so these are not presented in this paper.

Table 2: Number of prevalence estimates for all forms of violence by age and data source

| age | estimates | Countries | Studies | Sys Rev | DHS | WHO | RHS | MICS | HBSC | GSHS | PIRLS | TIMSS | EU kids | VACS | Optimus | GSS |
|--------------|---------------|-----------|----------|------------|--------------|------------|------------|--------------|--------------|--------------|--------------|--------------|------------|------------|------------|------------|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 178 | 44 | 44 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| 3 | 178 | 44 | 44 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| 4 | 178 | 44 | 44 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| 5 | 178 | 44 | 44 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| 6 | 184 | 46 | 46 | 4 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 |
| 7 | 200 | 49 | 52 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 12 | 10 | 0 | 0 | 8 | 0 |
| 8 | 392 | 69 | 99 | 8 | 30 | 0 | 0 | 140 | 0 | 0 | 118 | 88 | 0 | 0 | 8 | 0 |
| 9 | 1,102 | 105 | 261 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 517 | 330 | 50 | 0 | 8 | 27 |
| 10 | 1,205 | 108 | 277 | 6 | 30 | 0 | 0 | 140 | 0 | 0 | 557 | 360 | 50 | 0 | 8 | 54 |
| 11 | 1,429 | 110 | 309 | 2 | 30 | 0 | 0 | 140 | 336 | 0 | 493 | 316 | 50 | 0 | 8 | 54 |
| 12 | 1,350 | 142 | 337 | 4 | 30 | 0 | 0 | 140 | 0 | 366 | 295 | 403 | 50 | 0 | 8 | 54 |
| 13 | 1,865 | 151 | 403 | 10 | 30 | 0 | 0 | 140 | 336 | 416 | 135 | 657 | 50 | 29 | 8 | 54 |
| 14 | 1,410 | 147 | 330 | 15 | 30 | 0 | 0 | 140 | 0 | 420 | 38 | 625 | 50 | 30 | 8 | 54 |
| 15 | 1,633 | 152 | 262 | 33 | 102 | 8 | 20 | 0 | 336 | 420 | 16 | 547 | 50 | 31 | 16 | 54 |
| 16 | 870 | 111 | 230 | 30 | 286 | 20 | 24 | 0 | 0 | 38 | 8 | 413 | 50 | 31 | 16 | 54 |
| 17 | 645 | 86 | 166 | 15 | 221 | 32 | 24 | 0 | 0 | 30 | 2 | 247 | 0 | 31 | 16 | 27 |
| 18 | 466 | 71 | 124 | 15 | 244 | 40 | 24 | 0 | 0 | 0 | 0 | 112 | 0 | 31 | 0 | 0 |
| 19 | 367 | 56 | 93 | 2 | 256 | 44 | 24 | 0 | 0 | 0 | 0 | 10 | 0 | 31 | 0 | 0 |
| Total | 13,830 | - | - | 144 | 1,399 | 144 | 116 | 1,820 | 1,008 | 1,690 | 2,191 | 4,120 | 400 | 214 | 152 | 432 |

Note: PIRLS/TIMSS combined surveys are included under PIRLS (school grade 4).

Table 2 shows the overall breakdown of available data sources by age. Far more data were available for the adolescent period, from about age 11 upwards, versus age 10 and below. Table 2 also shows

data sources by age—strikingly, almost all data for the under 8-year-old age group came from the MICS, which measures caregivers reports of physical and psychological aggression against their children. For 8 to 11 year olds, data comes almost exclusively from MICS, and PIRLS and TIMSS, which are school-based surveys measuring violence from students to other students. Almost no surveys which met our inclusion criteria measured violence from other perpetrators, or sexual violence, against children below 11 years. Most surveys which measure sexual violence concentrated on the adolescent period. Annex 6 shows the data sources by geographic region, and Annex 7 shows the number of available estimates by perpetrator and form of violence.

Prevalence of recent physical and emotional violence perpetrated by household members

Household members appear to be the most common perpetrators of physical and emotional violence against children, based on available data. However, caregiver and child reports differ radically in terms of prevalence, and hence are summarised separately. Very few caregiver-reported data are available for children above age 14 years and no data for those below 2 years old. All caregiver-reported data comes from MICS and DHS, and is over a past-month recall period. Based on caregiver’s reports, for children aged 2 to 14 years, levels of past month emotional violence are higher than for physical violence (Figure 2). Levels of past-month emotional violence remain relatively constant over age group, with about 60% to 70% of boys and girls experiencing emotional violence from a caregiver or other household member at age 2-14. Levels of past-month physical violence are highest in younger age groups, with between 50 and 60% of girls and boys experiencing physical violence at age 2. Levels of past-month physical violence appear to decline slowly as age increases, and at age 14, about 40 to 50% of boys and girls experience physical violence from a caregiver or household member. Levels of emotional violence however remain relatively constant over age, for both boys and girls.

<<Figure 2>>

There are relatively few studies which collect children’s reports of physical and emotional violence perpetrated by caregivers (Annex 8) and also report age- and sex- specific prevalence. These few provide data on caregiver perpetrated violence for children aged 9 to 19 years. In general, the prevalence is far lower when compared to caregiver reports at each age. There is some suggestion from children’s reports that the prevalence of past-year physical violence from caregivers may decline over age, similar to caregiver reports. Children’s reports of emotional violence from caregivers are also rare, with only two studies reporting age- and sex-specific data on this for children aged 9 to 19 years. Estimates are far lower compared to caregiver reports, with fewer than 10% of 12 year olds reporting past-year emotional violence from caregivers, but nearly 40% of 19 year olds. There is some suggestion that prevalence of past-year violence increases over age group (in contrast to parent reports, which remain more constant over age group). There were no data available on sexual abuse from parents/caregivers which met the inclusion criteria.

Prevalence of recent physical and emotional violence perpetrated by students

Students are the second most common perpetrator of physical and emotional violence against children at the population level, based on available data. Globally, between 70 and 80% of all boys and girls aged 8 to about 11 years, have experienced past-year emotional violence from a school student (Figure 3). For those ages 12-17, prevalence is about 50%, reflecting the fact that fewer children attend secondary school globally versus primary school. Restricting to school-going children only, the prevalence of emotional violence is relatively constant across age groups (Annex 9). Age- and sex-specific data prior to age 6 are not available (although fewer children under age 6 will be in school). Levels of past-year physical violence experienced by students are also high—from each age after age 8 to about age 11, about 40% of girls and 50% of boys experienced past-year physical violence from a student. In boys, from age 12, prevalence declines slightly over increasing age; for

girls from age 12, prevalence remains more constant. In girls, overall levels are lower in most age groups versus boys, which partly reflects that fewer girls attend school globally versus boys.

<<Figure 3>>

Prevalence of recent physical, emotional and sexual violence perpetrated by intimate or dating partners

Based on available data, intimate partners are the third most common perpetrator of violence against girls in childhood. However, very few estimates for boys of any age, or girls below the age of 15, are available (Figure 4). Data is available for girls aged 15-19, largely owing to inclusion of this age group in the DHS. Past-year physical and emotional violence by intimate or dating partners are reported by about 7% of all girls aged 15, to about 13% of all girls aged 19 years. Past-year sexual violence from intimate and dating partners is reported by about 2% of all girls aged 15, but increases over age such that about 5% to 7% of girls aged 18 and 19 years report past-year sexual victimisation. Prevalence as a proportion of ever-partnered girls is in Annex 9.

<<Figure 4>>

Prevalence of recent physical violence by teachers, other authority figures and other adults

Very few studies provided age- and sex-specific period prevalence estimates for physical violence perpetrated by teachers, police and other adults. Prevalence from these studies are displayed individually for each age in Figure 5 (girls) and Figure 6 (boys). Data are available for children aged 9 to 18. Estimates of violence from teachers come mainly from one study conducted in Uganda, and estimates for authority figures come from the VAC Surveys in Kenya, Haiti, and Tanzania. Prevalence of physical violence from teachers is extremely high at each age, with more than 75% of 9 to 16 year olds reporting past-year physical violence from a teacher in Uganda. Violence from authority figures was also common but varied by country, with 6 to 23% of Haitian children reporting this across age groups, but with 15% to nearly 60% of Tanzanian children reporting this across age groups. Only one study had data on emotional and sexual violence from teachers[19], so this data is not summarised here.

<<Figure 5>>

<<Figure 6>>

DISCUSSION

We have shown that there are large gaps in existing global data on the prevalence and perpetrators of different forms of violence against children of different ages. There is a severe lack of self-report data on any form of violence against children under about 11 years of age; on sexual violence across a range of ages, and on neglect. Age- and sex-specific data on witnessing intimate partner violence is also rare. We also know much more about violence perpetrated by students and family members, versus other types of perpetrators—there is little data available on teachers, other authority figures, strangers, siblings, peers outside school settings and other adults. In terms of global availability, more data is available from Europe than from other regions, with South-East Asia being particularly under-represented. For both boys and girls, we have little idea of who the main perpetrators of sexual violence are, with the exception of intimate partners for girls aged 15 to 19 years. Despite

data gaps, where we are able to synthesise data, they show that children are most likely to experience physical and emotional violence from family members, followed by fellow students, and then intimate partners during adolescence. However, what little data exists on violence from teachers and other authority figures points to very high prevalence in some settings. Data also show variation by age, with emotional violence from both other students and caregivers remaining relatively constant over age, but physical violence from other students and caregivers declining over adolescence. Past-year prevalence of sexual violence from intimate partners appears to rise steadily with age across the adolescent period for girls. For boys, there is little age-specific data available.

As seen with estimates of violence from caregivers/families, prevalence varies widely depending on whether caregivers are reporting or children are reporting. Perhaps contrary to expectation, caregiver reports, mainly from the MICS, yield higher prevalence estimates versus children’s own reports (which tend to be from other surveys). The MICS data on emotional violence, as analysed here, include items measuring shouting, screaming and calling a child stupid or lazy (Annex 3), which may occur frequently but may not be viewed as particularly traumatic, which likely will increase disclosure by caregivers. Caregivers may be more likely to report these less severe acts of violence, relative to more severe forms. Children may also be more likely to recall incidents which were severe or traumatic for them, thus biasing self-reported estimates downwards. Additionally, younger children may have more trouble recalling events over a one year period versus older children, or parents. Further research is needed to understand the reasons for this difference and to understand which types of reports may be useful indicators for different purposes.

Strengths and Limitations

This is the first global review that has attempted to provide a more nuanced epidemiological breakdown of the prevalence of different forms of violence by age, sex and perpetrator. Whilst published data are available from specific studies presenting data across countries [13, 20-22], no global synthesis disaggregated by age is currently available. Our main limitation relates to data presentation of the underlying studies which we have included in the review—if published studies did not present data in an age- and sex-specific fashion, we were unable to include them. However, what we have synthesized represents the evidence from published data and large international datasets, and therefore the knowledge base available to those developing age-appropriate violence prevention programs and allocating funding. We were also unable to access one dataset which would have met the inclusion criteria (BECAN), and there may be others which our systematic search efforts did not pick up. We produced global average prevalence estimates—where there were enough data, we modelled these using meta-regression techniques and adjusted for differences in definitions of forms of violence and study quality characteristics. Although every effort was made to adjust for differences in measurement of violence across studies there may be residual confounding related to both definitions of violence (including whether studies asked about experience of specific acts of violence and how many questions they asked) and other study quality variables. These differences may in part explain age, sex and regional differences in prevalence estimates. Further, the school-based studies tended to include fewer questions about experience of different specific acts of violence, thus the school-based estimates may be more prone to misclassification of violence exposure relative to estimates of household and intimate partner violence. For most countries, data were only available from one or two survey years—pooling data from different years may obscure trends in the prevalence of violence over time. As with all studies on violence, there is likely to be under-reporting of certain forms of violence, particularly sexual violence, due to the stigma associated with victimisation and potential fear of reprisals. Our estimates are also based on population-based household and school-based surveys, which will include far fewer children who live outside of family care, on the street, or in institutions, and may under-represent experiences of

those in conflict settings. In some cases, similar to other global estimates, data from only a limited number of countries is currently available.

Once more countries conduct prevalence studies, these estimates will change. It is clear from looking within single studies that have measured violence from multiple perpetrators that perpetration patterns may differ by setting. In one study of children attending school in Uganda, physical violence from school staff was the most common form of violence experienced, followed by violence from caregivers and peers. Estimation efforts should be repeated as more comprehensive data becomes available in different settings.

Implications for future research, policy and programming

There is a clear need for more data on the experiences of younger children, particularly around family and sexual violence. This may stem partly from investigators' concerns about the validity of younger children's survey responses. For very young children it is likely that we must always rely on proxy reports; however for children of later primary school age, it may be possible to develop and test survey measures that allow them to directly report on their own experiences. Some school-based surveys do include questions on peer violence for fourth graders (about 9 years old). Efforts need to be made to develop methods to ask about other forms of violence in a reliable and valid way. Further data is also needed on perpetrators besides students and peers, intimate partners, and household members. This is particularly true for sexual violence, where we have little understanding of who perpetrators may be. Questions on violence from teachers and authority figures are included in some surveys, but this is generally not collected on a widespread basis—yet prevalence data show alarming figures in Uganda, Tanzania, and Kenya; for example, with up to 93% of students in Uganda reporting violence from school staff..

Comparability of existing surveys is limited, with a range of different questions being used to capture overlapping exposures to different forms of violence. Some of the larger surveys with good international coverage ask only two or three questions; conversely, more specialised violence surveys have been conducted in a much smaller number of countries. While each survey provides valuable information, standardisation of measures would be useful to support monitoring in countries, including related to the SDGs. Without further standardisation, countries will not be able to effectively track progress related to violence reduction. Similarly, our data synthesis clearly shows that experiences of violence in childhood are nearly universal. While all violence can be conceptualised as a violation of rights, a more nuanced understanding of what constitutes risky exposures from a public health perspective would be valuable for directing scarce prevention resources.

Programmatically, the home setting is of obvious importance. Both the US Centers for Disease Control and the WHO, along with 8 other key global partner organizations, have recently issued INSPIRE[23], guidance on effective programming to reduce violence against children, including in the home setting. There is a relatively robust evidence base around parenting and family strengthening programs, however the vast majority of evaluations have taken place in high income countries. Work is currently underway to test efficacy of a number of parenting programs in lower income countries (eg.[24]).

School environments must be targetted—if a child is attending school, they are likely to experience more violence in this environment than in the home. In many settings, first intimate partnerships will begin while one or the other partner is attending school, which also can provide an intervention opportunity to reduce sexual violence. INSPIRE contains recommendations for school programs, although it is notable that most of these programs focus on and have been tested for efficacy in relation to peer violence and bullying, rather than violence from staff to students or violence in intimate relationships. Only a handful of programs have been tested to reduce violence from school

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staff towards students[25-27], and recent reviews of dating violence prevention interventions suggest that many of these programs have limited evidence of efficacy[28, 29]. The inclusion of violence in childhood in the SDGs is welcome in the violence prevention and child health communities. Our results suggest that new, standardised data collection from a broader range of ages, which includes both sexes, is needed, along with a discussion about the ethical aspects of gathering such data from children and adolescents. At present, it will be difficult to monitor whether violence reductions happen equitably across all age groups of children, and across different areas of the world, as there are relatively few data sources that can present this information in a disaggregated way.

Conclusions

Violence against children is widespread, and must be addressed to improve children’s health and well-being. There are large gaps in current understandings of the epidemiology of violence against children. Improved data collection is needed to better inform policy and programming, and to meet SDG targets. Programmes to prevent violence within households are needed at scale, and increased focus on schools as a prevention site is urgently needed.

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Figures

Figure 1. Flow chart describing data inclusion

Figure 2: Prevalence of recent physical and emotional violence perpetrated by household members

Legend: Data sources: Multiple Indicator Cluster Surveys (MICS), Demographic and Health Surveys (DHS). Model shows caregivers reports of physical aggression by household members. Definitions are provided in Annex 3 and exact prevalence numbers are in Annex 5. To read bar graph: age of the child is on the y-axis; prevalence of each form of violence is on the x axis. Prevalence corresponds to the distance of the bar along the x-axis for boys (to the left), and girls (to the right). Forms of violence are overlaid; and the black bars are a 95% confidence interval. For example, for girls aged 2 years, the prevalence of physical violence is 56% (95%CI 49-63%), and the prevalence of emotional violence is 60% (95%CI 52-68%).

Figure 3: Prevalence of physical and emotional violence perpetrated by students against boys and girls in the past 12 months

Legend: Data sources: GSHS, HBSC, PIRLS, TIMSS and systematic review publications. Model shows children’s self-reported exposure. Definitions are provided in Annex 3 and exact prevalence number are in Annex 5. Pooled prevalence estimates at ages 6, 7 and 19 years are from unadjusted meta-analyses, all others are adjusted meta-regression estimates. To read bar graph: age of the child is on the y-axis; prevalence of each form of violence is on the x axis. Prevalence corresponds to the distance of the bar along the x-axis for boys (to the left), and girls (to the right). Forms of violence are overlaid; and the black bars are a 95% confidence interval. For example, for boys aged 8 years, the prevalence of physical violence is 54% (95%CI: 43-65) and the prevalence of emotional violence is 74% (95%CI 63-84%). Note that these estimates are for the entire population, not just school-attending boys and girls.

Figure 4: Prevalence of physical, emotional and sexual violence perpetrated by intimate or dating partners against boys and girls in the past 12 months

Legend: Data sources: Demographic and Health Surveys (DHS), World Health Organization Multi-Country Study on Women's Health and Domestic Violence against Women (WHO VAW), Reproductive Health Surveys (RHS), Good Schools Study (GSS) and Violence against Children Surveys (VACS, for physical violence only) and systematic review publications. Model shows children's self-reported exposure. Definitions are in Annex 3 and exact prevalence number are in Annex 5. Pooled prevalence estimates at ages 10, 11, 13 and 14 years are from unadjusted meta-analyses all others are adjusted meta-regression estimates. To read bar graph: age of the child is on the y-axis; prevalence of each form of violence is on the x axis. Prevalence corresponds to the distance of the bar along the x-axis for boys (to the left), and girls (to the right). Forms of violence are overlaid; and the black bars are a 95% confidence interval. For example, for girls aged 19 years, the prevalence of sexual violence is 5.2% (95%CI 3.3-7.0%); the prevalence of physical violence is 12.6% (95%CI 10.1-15.0%); and the prevalence of emotional violence is 13.24% (95%CI 10.01-16.47%). Note that these estimates are for the entire population, not just ever-partnered boys and girls.

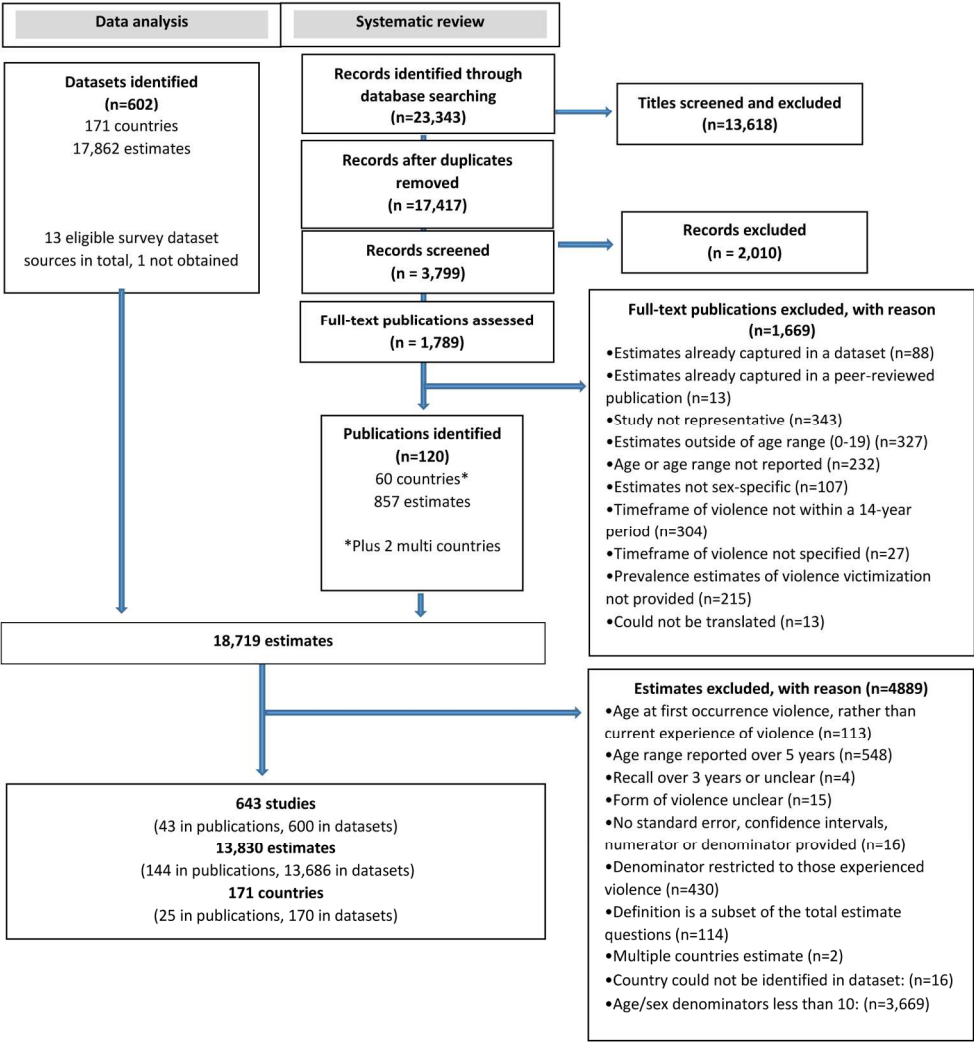
Figure 5. Prevalence of physical violence perpetrated by teachers, other authority figures and other adults against girls in the past 12 months

Legend: Estimates are children's self-reported exposure. Definitions are in Annex 3. To read the forest plot: for each year of age, perpetrator, data source and country are described along the y-axis. Along the x-axis, prevalence estimates from each are represented by a dot, with a bar drawn through to represent the 95% confidence interval.

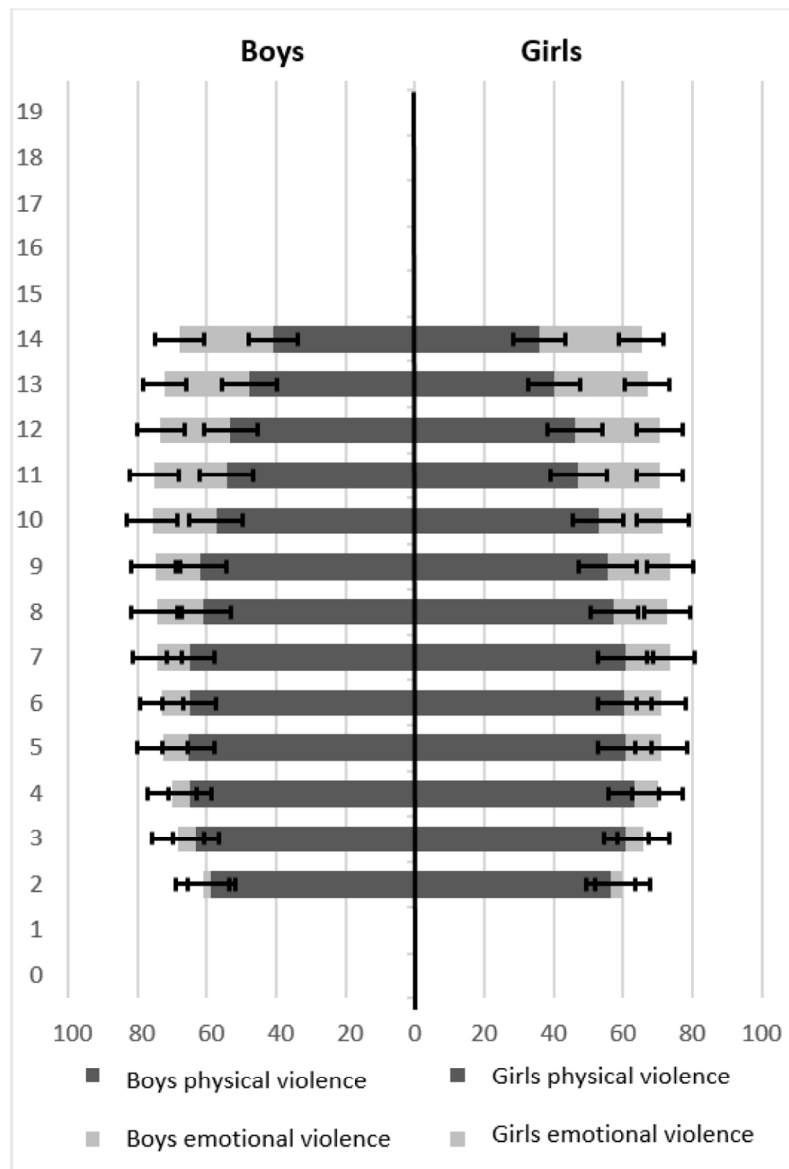
Figure 6. Prevalence of recent physical violence perpetrated by teachers, other authority figures and other adults against boys in the past 12 months

Estimates are children's self-reported exposure. Definitions are in Annex 3. To read the forest plot: for each year of age, perpetrator, data source and country are described along the y-axis. Along the x-axis, prevalence estimates from each are represented by a dot, with a bar drawn through to represent the 95% confidence interval.

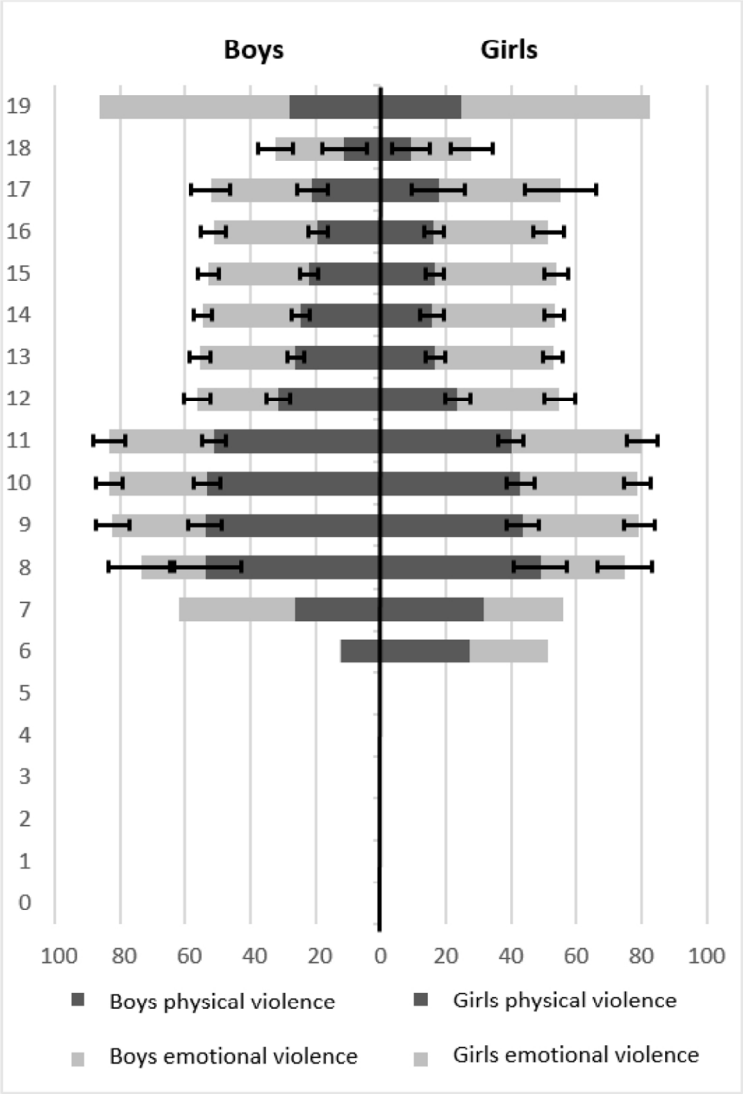
Figure 1. Flow chart describing data inclusion



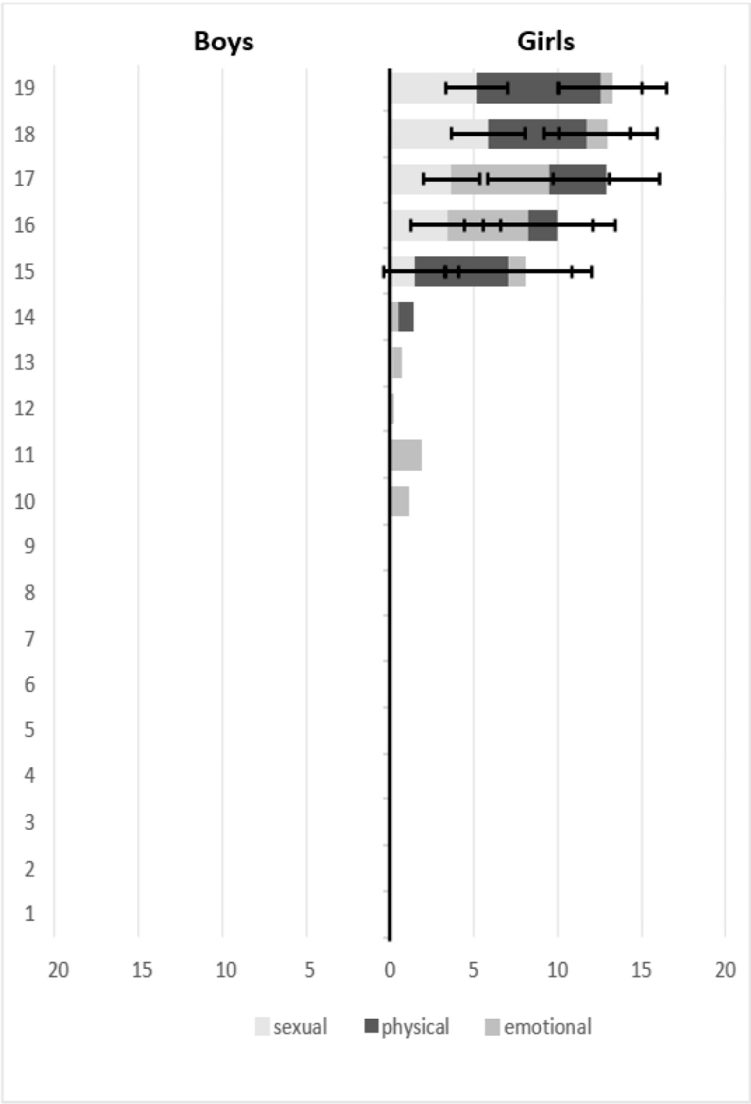
166x191mm (300 x 300 DPI)



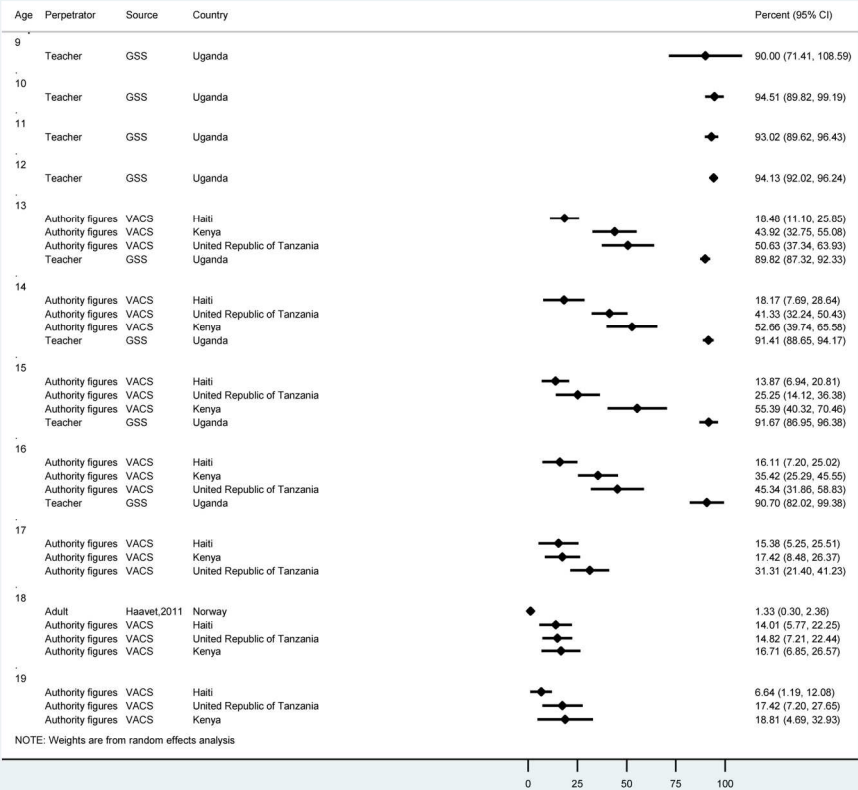
102x142mm (300 x 300 DPI)



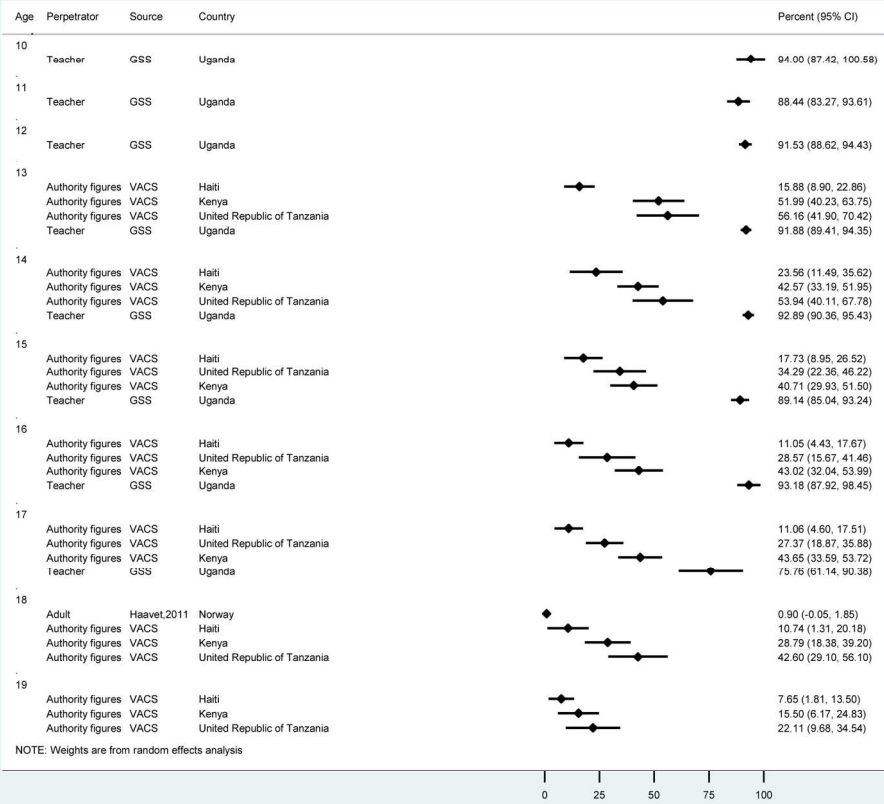
106x151mm (300 x 300 DPI)



105x150mm (300 x 300 DPI)



158x152mm (300 x 300 DPI)



163x149mm (300 x 300 DPI)

Annex 1. Search strategy and databases searched

1.0 Ovid Medline: Searched on 7 December, 2015

1. Child Abuse/ OR Child Abuse, Sexual/
2. Child/ OR Adolescent/ OR Young Adult/ OR Infant/ OR Infant, Newborn/ OR Students/ OR Child, Preschool/
3. (child* OR adolescen* OR boy\$1 OR boyhood OR girl* OR teen* OR preteen* OR pubescen* OR prepubescen* OR youth* OR juvenile* OR preteen* OR pre teen* OR young people* OR young person* OR early adult* OR young adult* OR infan* OR baby OR babies OR school* OR pupil* OR student* OR nursery OR preschool* OR pre school* OR partner* or spouse* or peer* OR boyfriend* or boy friend* or girlfriend* or girl friend or acquaintance* or non stranger* or nonstranger*).ti,ab,kw.
4. 2 OR 3
5. Rape/ OR Sex Offenses/ OR Incest/ OR Violence/ OR Domestic Violence/ OR Partner Violence/ OR Spouse Abuse/ OR Battered Women/ OR Aggression/ OR Punishment/ OR Bullying/
6. (rape\$1 OR rapist OR incest OR polyvictim* OR poly victim* OR pedophil* OR paedophil* OR corporal punish* OR bully OR bullies OR anti bully* OR bully victim* OR cyberbull* OR cybervictim* OR neglect*).ti,ab,kw.
7. sex* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR re victim* OR offence* OR offense* OR molest* OR harass* OR exploit*).ti,ab,kw.
8. phys* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,ab,kw.
9. (emotion* OR psycholog* OR mental) adj2 (violen* OR abus* OR maltreat*).ti,ab,kw.
10. (gender or peer) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR harass*).ti,ab,kw.
11. (intimate partner OR domestic partner OR partner* OR relationship* OR spouse* OR boyfriend* OR boy friend* OR girlfriend* OR girl friend OR date OR dating OR acquaintance* OR non stranger* OR nonstranger*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,ab,kw.
12. (witness* OR expos*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR harass*).ti,ab,kw.
13. 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12
14. 4 AND 13
15. 1 OR 14
16. Prevalence/ OR Incidence/ OR Cross-sectional studies/ OR Observational study/ OR exp Cohort studies/
17. (cross sectional OR observational OR prevalence OR incidence OR transversal OR retrospective OR longitudinal OR survey* OR cohort OR follow up OR followup).ti,ab,kw.
18. 16 OR 17
19. 15 AND 18
20. exp Africa/ OR exp Americas/ OR exp Asia/ OR exp Australia/ OR exp Europe/ OR exp Islands/ OR exp Oceania/
21. (Afghanistan OR Albania OR Algeria OR Africa OR American Samoa OR Andorra OR Angola OR Anguilla OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Australia OR Austria OR Azerbaijan OR Bahamas OR Bahrain OR Bangladesh OR Barbados OR Belarus OR Belgium OR Belize OR Benin OR Bermuda OR Bhutan OR Bolivia OR Bosnia OR Botswana OR Bougainville OR Brazil OR British Indian Ocean OR British Virgin Islands OR Brunei OR Bulgaria OR Burkina Faso OR Burundi OR Cambodia OR Cameroon OR Canada OR Cape Verde Islands OR Cayman Islands OR Central African Republic OR Chad OR Central America OR Chile OR China OR Macau OR Taiwan OR Colombia OR Comoros OR Congo OR Cook Islands OR Costa Rica OR Ivory Coast OR Croatia OR Cuba OR Cyprus OR Czech Republic OR Denmark OR Djibouti OR Dominica OR Dominican Republic OR Ecuador OR England OR Egypt OR El Salvador OR Equatorial Guinea OR Eritrea OR Estonia OR Ethiopia OR Europe OR Faeroe Islands OR Falkland Islands OR Federated States of Micronesia OR Fiji OR Finland OR France OR French Guiana OR French Polynesia OR Gabon OR Gambia OR Georgia OR Germany OR Ghana OR Gibraltar OR Greece OR Greenland OR Grenada OR Guadeloupe OR Guam OR Guatemala OR Guinea OR Guinea-Bissau OR Guyana OR Haiti OR Holy See OR Honduras OR Hungary OR Iceland OR India OR Indonesia OR Iran OR Iraq OR Ireland OR Israel OR Italy OR Jamaica OR Japan OR Jordan OR Kazakhstan OR Kenya OR Kiribati OR Korea OR Kosovo OR Kuwait OR Kyrgyzstan OR Laos OR Latvia OR Lebanon OR Lesotho OR Liberia OR Libya OR Liechtenstein OR Lithuania OR Luxembourg OR Macedonia OR Madagascar

OR Malawi OR Malaysia OR Maldives OR Mali OR Malta OR Martinique OR Mauritania OR Mauritius OR Mayotte OR Mexico OR Moldova OR Monaco OR Mongolia OR Montenegro OR Montserrat OR Morocco OR Mozambique OR Myanmar OR Namibia OR Nauru OR Nepal OR Netherlands OR Netherlands Antilles OR New Caledonia OR New Zealand OR Nicaragua OR Niger OR Nigeria OR Norway OR Oman OR Pakistan OR Palestine OR Panama OR Papua New Guinea OR Paraguay OR Peru OR Philippines OR Poland OR Portugal OR Puerto Rico OR Qatar OR Romania OR Russia OR Rwanda OR Saint Barthelemy OR Saint Helena OR Saint Kitts OR Saint Lucia OR Saint Martin OR Saint Pierre OR Saint Vincent OR Samoa OR San Marino OR Sao Tome OR Saudi Arabia OR Scotland OR Senegal OR Serbia OR Seychelles OR Sierra Leone OR Singapore OR Slovakia OR Slovenia OR Solomon Islands OR Somalia OR South Africa OR Spain OR Sri Lanka OR Sudan OR Suriname OR Swaziland OR Sweden OR Switzerland OR Syria OR Tajikistan OR Tanzania OR Thailand OR Timor Leste OR Togo OR Tokelau Islands OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turks OR Caicos OR Tuvalu OR Uganda OR Ukraine OR United Arab Emirates OR United Kingdom OR United States OR Uruguay OR Virgin Islands OR Uzbekistan OR Vanuatu OR Venezuela OR Vietnam OR Futuna OR Wales OR Yemen OR Zambia OR Zimbabwe OR Reunion OR Sao Tome OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR New Hampshire OR New Jersey OR New Mexico OR New York OR North Carolina OR North Dakota OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR Rhode Island OR South Carolina OR South Dakota OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR West Virginia OR Wisconsin OR Wyoming).hw,ti,ab,kw.

22. 20 OR 21

23. 19 and 22

24. (comment OR letter OR editorial OR conference abstract OR news OR newspaper article OR patient education handout OR case report).pt.

25. 23 NOT 24

26. systematic review.ti.

27. 25 NOT 26

28. exp animals/ not humans.sh.

29. 27 NOT 28

1.2 Ovid Embase: Searched on 7 December, 2015

1. exp Child Abuse/
2. Child/ OR Adolescent/ OR Young Adult/ OR Infant/ OR Newborn/ OR exp Student/ OR Preschool children/
3. (child* OR adolescen* OR boy\$1 OR boyhood OR girl* OR teen* OR preteen* OR pubescen* OR prepubescen* OR youth* OR juvenile* OR preteen* OR pre teen* OR young people* OR young person* OR early adult* OR young adult* OR infan* OR baby OR babies OR school* OR pupil* OR student* OR nursery OR preschool* OR pre school* OR partner* or spouse* or peer* OR boyfriend* or boy friend* or girlfriend* or girl friend or acquaintance* or non stranger* or nonstranger*).ti,kw.
4. 2 OR 3
5. exp Sexual assault/ OR Sexual crime/ OR Incest/ OR exp Violence/ OR Aggression/ OR Aggressiveness/ OR Bullying/ OR Hostility/
6. (rape\$1 OR rapist OR incest OR polyvictim* OR poly victim* OR pedophil* OR paedophil* OR corporal punish* OR bully OR bullies OR anti bully* OR bully victim* OR cyberbull* OR cybervictim* OR neglect*).ti,kw.
7. sex* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR re victim* OR offence* OR offense* OR molest* OR harass* OR exploit*).ti,kw.
8. phys* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,kw.
9. (emotion* OR psychologic* OR mental) adj2 (violen* OR abus* OR maltreat*).ti,kw.
10. (gender or peer) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR harass*).ti,kw.
11. (intimate partner OR domestic partner OR partner* OR relationship* OR spouse* OR boyfriend* OR boy friend* OR girlfriend* OR girl friend OR date OR dating OR acquaintance* OR non stranger* OR nonstranger*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,kw.

12. (witness* OR expos*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR harass*).ti,kw.
13. 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12
14. 4 AND 13
15. 1 OR 14
16. Cross-sectional study/ OR Prevalence/ OR Health Survey/ OR Observational Study/ OR Cohort Analysis/ OR Longitudinal Study/ OR Retrospective Study/
17. (cross sectional OR observational OR prevalence OR incidence OR transversal OR retrospective OR longitudinal OR survey* OR cohort OR follow up OR followup).ti,kw.
18. 16 OR 17
19. 15 AND 18
20. exp Eastern Hemisphere/ OR exp Western Hemisphere/ OR exp Pacific Islands/
21. (Afghanistan OR Albania OR Algeria OR Africa OR American Samoa OR Andorra OR Angola OR Anguilla OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Australia OR Austria OR Azerbaijan OR Bahamas OR Bahrain OR Bangladesh OR Barbados OR Belarus OR Belgium OR Belize OR Benin OR Bermuda OR Bhutan OR Bolivia OR Bosnia OR Botswana OR Bougainville OR Brazil OR British Indian Ocean OR British Virgin Islands OR Brunei OR Bulgaria OR Burkina Faso OR Burundi OR Cambodia OR Cameroon OR Canada OR Cape Verde Islands OR Cayman Islands OR Central African Republic OR Chad OR Central America OR Chile OR China OR Macau OR Taiwan OR Colombia OR Comoros OR Congo OR Cook Islands OR Costa Rica OR Ivory Coast OR Croatia OR Cuba OR Cyprus OR Czech Republic OR Denmark OR Djibouti OR Dominica OR Dominican Republic OR Ecuador OR England OR Egypt OR El Salvador OR Equatorial Guinea OR Eritrea OR Estonia OR Ethiopia OR Europe OR Faeroe Islands OR Falkland Islands OR Federated States of Micronesia OR Fiji OR Finland OR France OR French Guiana OR French Polynesia OR Gabon OR Gambia OR Georgia OR Germany OR Ghana OR Gibraltar OR Greece OR Greenland OR Grenada OR Guadeloupe OR Guam OR Guatemala OR Guinea OR Guinea-Bissau OR Guyana OR Haiti OR Holy See OR Honduras OR Hungary OR Iceland OR India OR Indonesia OR Iran OR Iraq OR Ireland OR Israel OR Italy OR Jamaica OR Japan OR Jordan OR Kazakhstan OR Kenya OR Kiribati OR Korea OR Kosovo OR Kuwait OR Kyrgyzstan OR Laos OR Latvia OR Lebanon OR Lesotho OR Liberia OR Libya OR Liechtenstein OR Lithuania OR Luxembourg OR Macedonia OR Madagascar OR Malawi OR Malaysia OR Maldives OR Mali OR Malta OR Martinique OR Mauritania OR Mauritius OR Mayotte OR Mexico OR Moldova OR Monaco OR Mongolia OR Montenegro OR Montserrat OR Morocco OR Mozambique OR Myanmar OR Namibia OR Nauru OR Nepal OR Netherlands OR Netherlands Antilles OR New Caledonia OR New Zealand OR Nicaragua OR Niger OR Nigeria OR Norway OR Oman OR Pakistan OR Palestine OR Panama OR Papua New Guinea OR Paraguay OR Peru OR Philippines OR Poland OR Portugal OR Puerto Rico OR Qatar OR Romania OR Russia OR Rwanda OR Saint Barthelemy OR Saint Helena OR Saint Kitts OR Saint Lucia OR Saint Martin OR Saint Pierre OR Saint Vincent OR Samoa OR San Marino OR Sao Tome OR Saudi Arabia OR Scotland OR Senegal OR Serbia OR Seychelles OR Sierra Leone OR Singapore OR Slovakia OR Slovenia OR Solomon Islands OR Somalia OR South Africa OR Spain OR Sri Lanka OR Sudan OR Suriname OR Swaziland OR Sweden OR Switzerland OR Syria OR Tajikistan OR Tanzania OR Thailand OR Timor Leste OR Togo OR Tokelau Islands OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turks OR Caicos OR Tuvalu OR Uganda OR Ukraine OR United Arab Emirates OR United Kingdom OR United States OR Uruguay OR Virgin Islands OR Uzbekistan OR Vanuatu OR Venezuela OR Vietnam OR Futuna OR Wales OR Yemen OR Zambia OR Zimbabwe OR Reunion OR Sao Tome OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR New Hampshire OR New Jersey OR New Mexico OR New York OR North Carolina OR North Dakota OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR Rhode Island OR South Carolina OR South Dakota OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR West Virginia OR Wisconsin OR Wyoming).hw,ti,kw.
22. 20 OR 21
23. 19 and 22
24. (letter OR editorial OR conference abstract OR report).pt.
25. 23 NOT 24
26. systematic review.ti.
27. 25 NOT 26
28. exp animal/ not human.sh.

29. 27 NOT 28

1.3 PsychInfo: Searched on 7 December, 2015

1. exp Child Abuse/ OR Child Neglect/ OR Child Sexual Abuse/
2. exp Students/
3. (child* OR adolescen* OR boy\$1 OR boyhood OR girl* OR teen* OR preteen* OR pubescen* OR prepubescen* OR youth* OR juvenile* OR preteen* OR pre teen* OR young people* OR young person* OR early adult* OR young adult* OR infan* OR baby OR babies OR school* OR pupil* OR student* OR nursery OR preschool* OR pre school* OR partner* or spouse* or peer* OR boyfriend* or boy friend* or girlfriend* or girl friend or acquaintance* or non stranger* or nonstranger*).ti,id.
4. 2 OR 3
5. exp Rape/ OR exp Sexual abuse/ OR Domestic Violence/ OR exp Partner Abuse/ OR Physical Abuse/ OR Sex offenses/ OR Verbal Abuse/ OR School Violence/ OR Violent Crime/ OR Exposure to Violence/ OR Family Crime/ OR exp Incest/ OR exp Bullying/ OR exp Aggressive Behavior/ OR Punishment/
6. (rape\$1 OR rapist OR incest OR polyvictim* OR poly victim* OR pedophil* OR paedophil* OR corporal punish* OR bully OR bullies OR anti bully* OR bully victim* OR cyberbull* OR cybervictim* OR neglect*).ti,id.
7. sex* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR re victim* OR offence* OR offense* OR molest* OR harass* OR exploit*).ti,id.
8. phys* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,id.
9. (emotion* OR psychologic* OR mental) adj2 (violen* OR abus* OR maltreat*).ti,id.
10. (gender or peer) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR harass*).ti,id.
11. (intimate partner OR domestic partner OR partner* OR relationship* OR spouse* OR boyfriend* OR boy friend* OR girlfriend* OR girl friend OR date OR dating OR acquaintance* OR non stranger* OR nonstranger*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,id.
12. (witness* OR expos*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR harass*).ti,id.
13. 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12
14. Limit 13 to (100 childhood OR 120 neonatal OR 140 Infancy <2 to 23 mo> OR 160 preschool age OR 180 school age OR 200 adolescence OR 320 Young adulthood)
15. 4 AND 14
16. 1 OR 15
17. Surveys/ OR Cohort analysis/ OR Longitudinal studies/
18. (cross sectional OR observational OR prevalence OR incidence OR transversal OR retrospective OR longitudinal OR survey* OR cohort OR follow up OR followup).ti,id.
19. 17 OR 18
20. 16 AND 19
21. exp Countries/
22. (Afghanistan OR Albania OR Algeria OR Africa OR American Samoa OR Andorra OR Angola OR Anguilla OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Australia OR Austria OR Azerbaijan OR Bahamas OR Bahrain OR Bangladesh OR Barbados OR Belarus OR Belgium OR Belize OR Benin OR Bermuda OR Bhutan OR Bolivia OR Bosnia OR Botswana OR Bougainville OR Brazil OR British Indian Ocean OR British Virgin Islands OR Brunei OR Bulgaria OR Burkina Faso OR Burundi OR Cambodia OR Cameroon OR Canada OR Cape Verde Islands OR Cayman Islands OR Central African Republic OR Chad OR Central America OR Chile OR China OR Macau OR Taiwan OR Colombia OR Comoros OR Congo OR Cook Islands OR Costa Rica OR Ivory Coast OR Croatia OR Cuba OR Cyprus OR Czech Republic OR Denmark OR Djibouti OR Dominica OR Dominican Republic OR Ecuador OR England OR Egypt OR El Salvador OR Equatorial Guinea OR Eritrea OR Estonia OR Ethiopia OR Europe OR Faeroe Islands OR Falkland Islands OR Federated States of Micronesia OR Fiji OR Finland OR France OR French Guiana OR French Polynesia OR Gabon OR Gambia OR Georgia OR Germany OR Ghana OR Gibraltar OR Greece OR Greenland OR Grenada OR Guadeloupe OR Guam OR Guatemala OR Guinea OR Guinea-Bissau OR Guyana OR Haiti OR Holy See OR Honduras OR Hungary OR Iceland OR India OR Indonesia OR Iran OR Iraq OR Ireland OR Israel OR Italy OR Jamaica OR Japan OR Jordan OR Kazakhstan OR Kenya OR Kiribati OR Korea OR Kosovo OR Kuwait OR Kyrgyzstan OR Laos OR Latvia OR Lebanon OR Lesotho OR

Liberia OR Libya OR Liechtenstein OR Lithuania OR Luxembourg OR Macedonia OR Madagascar OR Malawi OR Malaysia OR Maldives OR Mali OR Malta OR Martinique OR Mauritania OR Mauritius OR Mayotte OR Mexico OR Moldova OR Monaco OR Mongolia OR Montenegro OR Montserrat OR Morocco OR Mozambique OR Myanmar OR Namibia OR Nauru OR Nepal OR Netherlands OR Netherlands Antilles OR New Caledonia OR New Zealand OR Nicaragua OR Niger OR Nigeria OR Norway OR Oman OR Pakistan OR Palestine OR Panama OR Papua New Guinea OR Paraguay OR Peru OR Philippines OR Poland OR Portugal OR Puerto Rico OR Qatar OR Romania OR Russia OR Rwanda OR Saint Barthelemy OR Saint Helena OR Saint Kitts OR Saint Lucia OR Saint Martin OR Saint Pierre OR Saint Vincent OR Samoa OR San Marino OR Sao Tome OR Saudi Arabia OR Scotland OR Senegal OR Serbia OR Seychelles OR Sierra Leone OR Singapore OR Slovakia OR Slovenia OR Solomon Islands OR Somalia OR South Africa OR Spain OR Sri Lanka OR Sudan OR Suriname OR Swaziland OR Sweden OR Switzerland OR Syria OR Tajikistan OR Tanzania OR Thailand OR Timor Leste OR Togo OR Tokelau Islands OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turks OR Caicos OR Tuvalu OR Uganda OR Ukraine OR United Arab Emirates OR United Kingdom OR United States OR Uruguay OR Virgin Islands OR Uzbekistan OR Vanuatu OR Venezuela OR Vietnam OR Futuna OR Wales OR Yemen OR Zambia OR Zimbabwe OR Reunion OR Sao Tome OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR New Hampshire OR New Jersey OR New Mexico OR New York OR North Carolina OR North Dakota OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR Rhode Island OR South Carolina OR South Dakota OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR West Virginia OR Wisconsin OR Wyoming).hw,id,ti.

23. 21 OR 22

24. 20 and 23

25. limit 24 to (chapter OR column/opinion OR comment/reply OR editorial OR letter)

26. 24 NOT 25

27. systematic review.ti.

28. 26 NOT 27

29. exp animals/ NOT humans.sh.

30. 28 NOT 29

1.4 Global Health: Searched on 7 December, 2015

1. exp Child Abuse/ OR Child Neglect/

2. exp Children/ OR Adolescents/ OR Young Adults/ OR exp Infants/ OR exp Students/

3. (child* OR adolescen* OR boy\$1 OR boyhood OR girl* OR teen* OR preteen* OR pubescen* OR prepubescen* OR youth* OR juvenile* OR preteen* OR pre teen* OR young people* OR young person* OR early adult* OR young adult* OR infan* OR baby OR babies OR school* OR pupil* OR student* OR nursery OR preschool* OR pre school* OR partner* or spouse* or peer* OR boyfriend* or boy friend* or girlfriend* or girl friend or acquaintance* or non stranger* or nonstranger*).ti,id.

4. 2 OR 3

5. Sexual Assault/ OR Sexual Abuse/ OR Aggressive Behavior/ OR Domestic Violence/ OR Spouse Abuse/ OR Aggression/ OR Punishment/

6. (rape\$1 OR rapist OR incest OR polyvictim* OR poly victim* OR pedophil* OR paedophil* OR corporal punish* OR bully OR bullies OR anti bully* OR bully victim* OR cyberbull* OR cybervictim* OR neglect*).ti,id.

7. sex* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR re victim* OR offence* OR offense* OR molest* OR harass* OR exploit*).ti,id.

8. phys* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,id.

9. (emotion* OR psycholog* OR mental) adj2 (violen* OR abus* OR maltreat*).ti,id.

10. (gender or peer) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR harass*).ti,id.

11. (intimate partner OR domestic partner OR partner* OR relationship* OR spouse* OR boyfriend* OR boy friend* OR girlfriend* OR girl friend OR date OR dating OR acquaintance* OR non stranger* OR nonstranger*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,id.

12. (witness* OR expos*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR harass*).ti,id.
13. 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12
14. 4 AND 13
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19. 15 AND 18
20. exp Africa/ OR exp America/ OR exp Asia/ OR exp Australia/ OR exp Europe/ OR exp Pacific Islands/ OR exp Oceania/
21. (Afghanistan OR Albania OR Algeria OR Africa OR American Samoa OR Andorra OR Angola OR Anguilla OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Australia OR Austria OR Azerbaijan OR Bahamas OR Bahrain OR Bangladesh OR Barbados OR Belarus OR Belgium OR Belize OR Benin OR Bermuda OR Bhutan OR Bolivia OR Bosnia OR Botswana OR Bougainville OR Brazil OR British Indian Ocean OR British Virgin Islands OR Brunei OR Bulgaria OR Burkina Faso OR Burundi OR Cambodia OR Cameroon OR Canada OR Cape Verde Islands OR Cayman Islands OR Central African Republic OR Chad OR Central America OR Chile OR China OR Macau OR Taiwan OR Colombia OR Comoros OR Congo OR Cook Islands OR Costa Rica OR Ivory Coast OR Croatia OR Cuba OR Cyprus OR Czech Republic OR Denmark OR Djibouti OR Dominica OR Dominican Republic OR Ecuador OR England OR Egypt OR El Salvador OR Equatorial Guinea OR Eritrea OR Estonia OR Ethiopia OR Europe OR Faeroe Islands OR Falkland Islands OR Federated States of Micronesia OR Fiji OR Finland OR France OR French Guiana OR French Polynesia OR Gabon OR Gambia OR Georgia OR Germany OR Ghana OR Gibraltar OR Greece OR Greenland OR Grenada OR Guadeloupe OR Guam OR Guatemala OR Guinea OR Guinea-Bissau OR Guyana OR Haiti OR Holy See OR Honduras OR Hungary OR Iceland OR India OR Indonesia OR Iran OR Iraq OR Ireland OR Israel OR Italy OR Jamaica OR Japan OR Jordan OR Kazakhstan OR Kenya OR Kiribati OR Korea OR Kosovo OR Kuwait OR Kyrgyzstan OR Laos OR Latvia OR Lebanon OR Lesotho OR Liberia OR Libya OR Liechtenstein OR Lithuania OR Luxembourg OR Macedonia OR Madagascar OR Malawi OR Malaysia OR Maldives OR Mali OR Malta OR Martinique OR Mauritania OR Mauritius OR Mayotte OR Mexico OR Moldova OR Monaco OR Mongolia OR Montenegro OR Montserrat OR Morocco OR Mozambique OR Myanmar OR Namibia OR Nauru OR Nepal OR Netherlands OR Netherlands Antilles OR New Caledonia OR New Zealand OR Nicaragua OR Niger OR Nigeria OR Norway OR Oman OR Pakistan OR Palestine OR Panama OR Papua New Guinea OR Paraguay OR Peru OR Philippines OR Poland OR Portugal OR Puerto Rico OR Qatar OR Romania OR Russia OR Rwanda OR Saint Barthelemy OR Saint Helena OR Saint Kitts OR Saint Lucia OR Saint Martin OR Saint Pierre OR Saint Vincent OR Samoa OR San Marino OR Sao Tome OR Saudi Arabia OR Scotland OR Senegal OR Serbia OR Seychelles OR Sierra Leone OR Singapore OR Slovakia OR Slovenia OR Solomon Islands OR Somalia OR South Africa OR Spain OR Sri Lanka OR Sudan OR Suriname OR Swaziland OR Sweden OR Switzerland OR Syria OR Tajikistan OR Tanzania OR Thailand OR Timor Leste OR Togo OR Tokelau Islands OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turks OR Caicos OR Tuvalu OR Uganda OR Ukraine OR United Arab Emirates OR United Kingdom OR United States OR Uruguay OR Virgin Islands OR Uzbekistan OR Vanuatu OR Venezuela OR Vietnam OR Futuna OR Wales OR Yemen OR Zambia OR Zimbabwe OR Reunion OR Sao Tome OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR New Hampshire OR New Jersey OR New Mexico OR New York OR North Carolina OR North Dakota OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR Rhode Island OR South Carolina OR South Dakota OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR West Virginia OR Wisconsin OR Wyoming).hw,ti,id.
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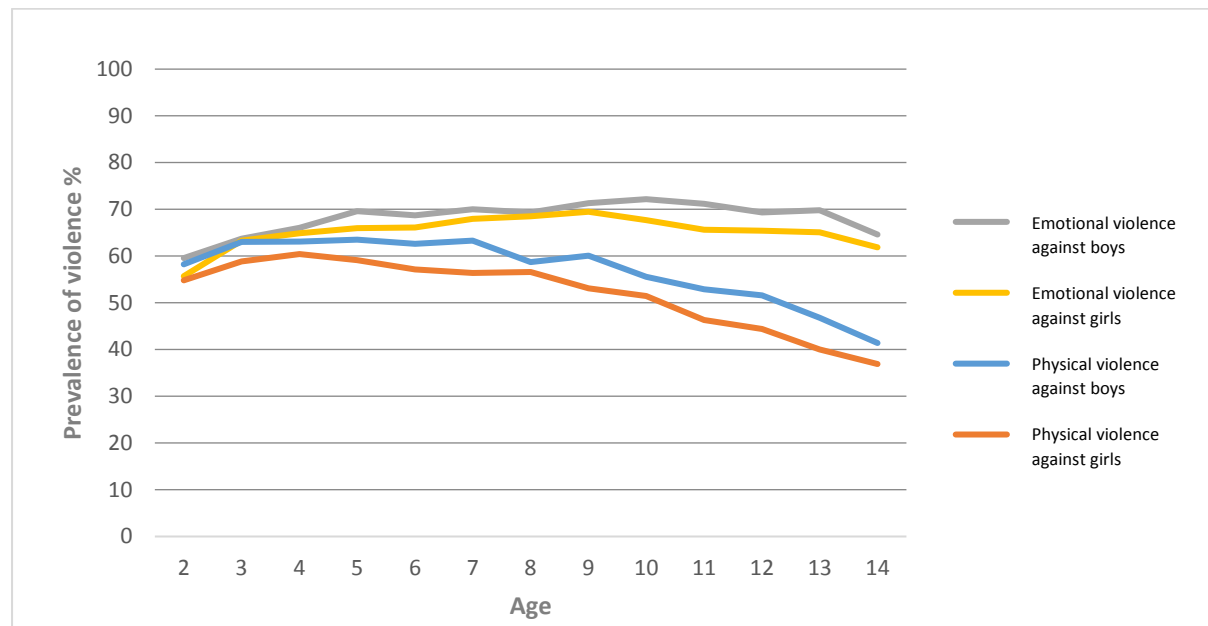
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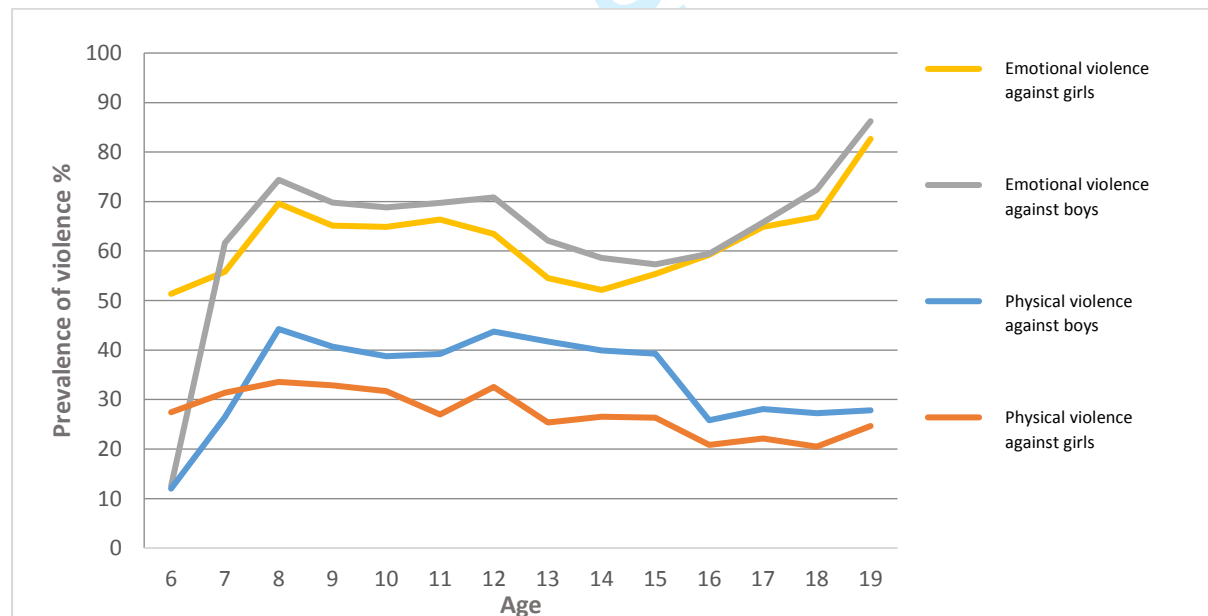
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Annex 2. Unadjusted global violence prevalence estimates of violence against children

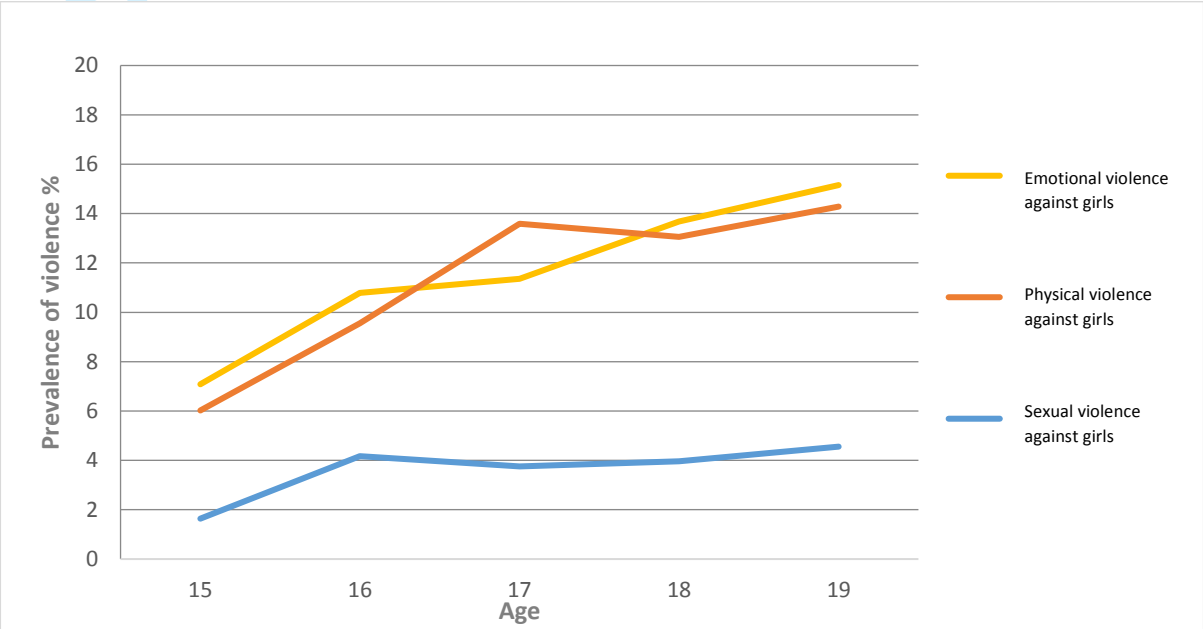
2.0 Prevalence of physical and emotional violence perpetrated by household members against boys and girls in the past month, by age of child (unadjusted global pooled estimates)



2.1 Prevalence of physical and emotional violence perpetrated by students against boys and girls in the past 12 months, by age of child (unadjusted global pooled estimates)



2.2 Physical, emotional and sexual violence perpetrated by intimate or dating partners against girls in the past 12 months, by age of girl (unadjusted global pooled estimates - adjusted by population ever had sex only)



Annex 3. Definitions of violence and sources of data for meta-regression models

Note: All violence recall timeframes are in the last 12 months unless stated otherwise.

3.0 Definitions of physical and emotional violence from household members

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|------------------|--|
| Multiple Indicator Cluster Surveys (MICS), ¹ Demographic and Health Surveys (DHS) ² | Proxy reports from caregivers about violence from household members | Physical | Adapted Conflict Tactics Scale. Answered 'yes' or 'no' to the following: Adults use certain ways to teach children the right behaviour or to address a behaviour problem. I will read various methods that are used. Please tell me if you or anyone else in your household has used this method with (name) in the past month: 1) Shook him/her; 2) Spanked, hit or slapped him/her on the bottom with bare hand; 3) Hit him/her on the bottom or elsewhere on the body with something like a belt, hairbrush, stick or other hard object; 4) Hit or slapped him/her on the face, head or ears; 5) Hit or slapped him/her on the hand, arm, or leg; 6) Beat him/her up, that is hit him/her over and over as hard as can. A child was considered exposed if having experienced at least 1 act of violence, according to the caregiver report. |
| MICS, ¹ DHS ² | Proxy reports from caregivers about violence from household members | Emotional | Adapted Conflict Tactics Scale. Answered 'yes' or 'no' to the following: Adults use certain ways to teach children the right behaviour or to address a behaviour problem. I will read various methods that are used. Please tell me if you or anyone else in your household has used this method with (name) in the past month. 1) Shouted, yelled at or screamed at him/her; 2) Called him/her dumb, lazy, or another name like that. (took away privileges, forbade something (name) liked or did not allow him/her to leave the house. – not included.) A child was considered exposed if having experienced at least 1 act of violence, according to the caregiver report. |
| Good Schools Study (GSS) ³ | Children's self reports (not included in main regression model; detailed in Annex 7) | Physical | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI). Answered 'yes' or 'no' to the following: Has [a parent or caregiver or another relative] ever: 1) Twisted your arm or any other body part, slapped you, pushed you or thrown something at you? 2) Punched you, kicked you, or hit you with a closed fist? 3) Hit you with an object, such as a stick or a cane, or whipped you? 4) Cut you with a sharp object or burnt you? A child was considered exposed if reporting having experienced at least 1 act of violence. |

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|------------------|---|
| GSS ³ | Children's self reports (not included in main regression model; detailed in Annex 7) | Emotional | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI). Answered 'yes' or 'no' to the following: Has [a parent or caregiver or another relative] ever: 1) Insulted you, or called you rude or hurtful names? 2) Accused you of witchcraft? 2) Locked you out or made you stay outside? 4) Not given you food? A child was considered exposed if reporting having experienced at least 1 act of violence. |
| Violence Against Children Surveys (VACS) ⁴ | Children's self reports (not included in main regression model; detailed in Annex 7) | Physical | Answered 'yes' or 'no' to the following: Kenya and Tanzania: 1) Has a parent or any adult relative ever punched you, kicked you, whipped you, or beat you with an object? 2) Has a parent or any adult relative ever used or threatened to use a knife or other weapon against you? Haiti: 1) Has/did a parent, caregiver, any adult relative, or another adult household member ever punch you, kick you, whip you, or beat you with an object? 2) Has/did a parent, caregiver, any adult relative, or another adult household member ever choke you, smother you or try to drown you? 3) Has/did a parent, caregiver, any adult relative, or another adult household member ever burn or scald you intentionally (including putting hot pepper in your mouth or on another body part)? 4) Has/did a parent, caregiver, any adult relative, or another adult household member ever use or threaten to use a knife or other weapon against you? A child was considered exposed if reporting having experienced at least 1 act of violence. |
| VACS ⁴ | Children's self reports (not included in main regression model; detailed in Annex 7) | Emotional | Haiti: 1) Has/did a parent, caregiver, any adult relative, or another adult household member ever say that you were not loved or did not deserve to be loved?, 2) Has/did a parent, caregiver, any adult relative, or another adult household member ever say that they wished you had never been born or were dead?, 3) Has/did a parent, caregiver, any adult relative, or another adult household member ever ridicule you or put you down (for example say that you were stupid or useless)?, 4) Has/did a parent, caregiver, any adult relative, or another adult household member ever threaten to abandon you or threaten you that they would force you to leave home? A child was considered exposed if reporting having experienced at least 1 act of violence. |

| Data source | Notes | Form of Violence | Definition of violence |
|----------------------------------|--|------------------|--|
| Helweg-Larsen, 2012 ⁵ | Children's self reports (not included in main regression model; detailed in Annex 7) | Physical | Danish version of the Conflict Tactics Scale created by Straus. The scale consists of 14 items beginning with aggressive verbalization by the parent towards the child and moving to severe physically violent acts. Participants responded by indicating whether they had experienced such acts (1 = yes) or not (0 = no) during the previous 12 months. An adolescent was considered to have been exposed to physical violence if reporting having experienced at least one act of mild or severe physical violence. (recall: 12 months) |

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3.1 Physical violence from students, data sources by age- boys

| age | Sys Rev | GSHS | HBSC | PIRL | TIMSS | Total |
|-------|------------|------|------|------|-------|-------|
| 6 | 1 | 0 | 0 | 0 | 0 | 1 |
| 7 | 0 | 0 | 0 | 3 | 3 | 6 |
| 8 | 0 | 0 | 0 | 30 | 22 | 52 |
| 9 | 0 | 0 | 0 | 129 | 83 | 212 |
| 10 | 0 | 0 | 0 | 139 | 91 | 230 |
| 11 | 0 | 0 | 42 | 127 | 81 | 250 |
| 12 | 0 | 90 | 0 | 76 | 100 | 266 |
| 13 | 0 | 103 | 42 | 36 | 169 | 350 |
| 14 | 1 | 105 | 0 | 12 | 156 | 274 |
| 15 | 1 | 105 | 42 | 4 | 139 | 291 |
| 16 | 1 | 9 | 0 | 2 | 107 | 119 |
| 17 | 0 | 7 | 0 | 1 | 65 | 73 |
| 18 | 0 | 0 | 0 | 0 | 30 | 30 |
| 19 | 0 | 0 | 0 | 0 | 3 | 3 |
| Total | 4 | 419 | 126 | 559 | 1,049 | 2,157 |

3.2 Physical violence from students, data sources by age- girls

| age | Sys Rev | GSHS | HBSC | PIRL | TIMSS | Total |
|-------|------------|------|------|------|-------|-------|
| 6 | 1 | 0 | 0 | 0 | 1 | 2 |
| 7 | 0 | 0 | 0 | 3 | 2 | 5 |
| 8 | 0 | 0 | 0 | 29 | 22 | 51 |
| 9 | 0 | 0 | 0 | 129 | 82 | 211 |
| 10 | 0 | 0 | 0 | 139 | 89 | 228 |
| 11 | 0 | 0 | 42 | 119 | 77 | 238 |
| 12 | 0 | 92 | 0 | 71 | 101 | 264 |
| 13 | 0 | 104 | 42 | 31 | 159 | 336 |
| 14 | 1 | 104 | 0 | 7 | 156 | 268 |
| 15 | 1 | 104 | 42 | 4 | 134 | 285 |
| 16 | 1 | 9 | 0 | 2 | 99 | 111 |
| 17 | 0 | 7 | 0 | 0 | 58 | 65 |
| 18 | 0 | 0 | 0 | 0 | 26 | 26 |
| 19 | 0 | 0 | 0 | 0 | 2 | 2 |
| Total | 4 | 420 | 126 | 534 | 1008 | 2092 |

3.3 Emotional violence from students, data sources per age- boys

| source | | | | |
|--------|---------|------|-------|-------|
| age | Sys Rev | PIRL | TIMSS | Total |
| 6 | 1 | 0 | 0 | 1 |
| 7 | 0 | 1 | 3 | 4 |
| 8 | 0 | 16 | 22 | 38 |
| 9 | 0 | 51 | 83 | 134 |
| 10 | 0 | 56 | 91 | 147 |
| 11 | 0 | 52 | 81 | 133 |
| 12 | 0 | 30 | 100 | 130 |
| 13 | 0 | 14 | 169 | 183 |
| 14 | 2 | 7 | 156 | 165 |
| 15 | 1 | 3 | 139 | 143 |
| 16 | 0 | 2 | 107 | 109 |
| 17 | 1 | 1 | 65 | 67 |
| 18 | 0 | 0 | 30 | 30 |
| 19 | 0 | 0 | 3 | 3 |
| Total | 5 | 233 | 1,049 | 1,287 |

Note: emotional cyber bullying not included in regression models (Data sources: HSBC and publications).

3.4 Emotional violence from students, data source per age- girls

| age | Sys Rev | PIRL | TIMSS | Total |
|-------|---------|------|-------|-------|
| 6 | 1 | 0 | 1 | 2 |
| 7 | 0 | 0 | 2 | 2 |
| 8 | 0 | 16 | 22 | 38 |
| 9 | 0 | 51 | 82 | 133 |
| 10 | 0 | 56 | 89 | 145 |
| 11 | 0 | 50 | 77 | 127 |
| 12 | 0 | 25 | 102 | 127 |
| 13 | 0 | 13 | 160 | 173 |
| 14 | 2 | 4 | 157 | 163 |
| 15 | 1 | 3 | 135 | 139 |
| 16 | 0 | 2 | 100 | 102 |
| 17 | 1 | 0 | 59 | 60 |
| 18 | 0 | 0 | 26 | 26 |
| 19 | 0 | 0 | 2 | 2 |
| Total | 5 | 220 | 1,014 | 1,239 |

Note: cyber emotional bullying not included in regression models (Data sources: HSBC and publications).

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3.5 Definitions of physical and emotional violence from students

| Data source | Notes | Form of Violence | Definition of violence |
|---|-------------------------|------------------|---|
| Global School-based Student Health Survey (GSHS) ⁶ | Children's self reports | Physical | Physical attack or physical fight in the last 12 months. Some GSHS only ask about physical fights in last 12 months |
| Health Behaviour in School-Aged Children (HBSC) ⁷ | Children's self reports | Physical | Physical fight in the last 12 months |
| Trends in International Mathematics and Science Study (TIMSS), Progress in the Evaluation of Educational Achievement (PIRLS) ⁸ | Children's self reports | Physical | Hit or hurt by another student at school. Some older PIRLS surveys may have used "injured by another student". All 2011 surveys asked about the last 12 months and all surveys prior to 2011 asked about experience in the last month. |
| Marsh, 2010 ⁹ | Children's self reports | Physical | Participants reported the frequency with which they themselves had experienced this year at school: physically hurting (Nairn & Smith, 2002). Item responses were on a 4-point scale with 1=often and 4=never. 12 months recall. |
| Undheim, 2010 ¹⁰ | Children's self reports | Physical | I am tormented, beaten, pulled by the hair, kicked, or attacked in a bad way (physical assault). Rated on a 0- to 5-point scale from never to more than three times a week during the past 6 months, in school or on the way to school. Reported prevalence for 12 to 15 year olds, included in analysis as 14 years. |
| Zhou, 2015 ¹¹ | Children's self reports | Physical | Similar question asked for peer physical violence (not explicitly given) "Did a group of kids or gang hit, jump, or attack you?". 12 months recall. Reported prevalence for 15 to 17 year olds, included in analysis as 16 years. |
| Jansen, 2012 ¹² | Proxy report by teacher | Physical | Bullying and victimization during the past three months were studied as outcome. The teacher of each elementary school child rated the occurrence of four victimization and four bullying items. The victimization items assessed 1) whether a child was physically victimized by other children, for instance by being hit, kicked, pinched, or bitten (further referred to as physical victimization), etc. |

| Data source | Notes | Form of Violence | Definition of violence |
|---------------------------------|-------------------------|------------------|---|
| TIMSS, PIRLS ⁸ | Children's self reports | Emotional | TIMSS 2003 and 2007 asked about during the last month at school: was something stolen from you, were you made fun of or called names, left out of games or activities by other students, were you made to do things you didn't want to do by other students. PIRLS 2011 asked three of the same questions, but did not ask "were you made to do things you didn't want to" but asked instead "did someone spread lies about you at school" and TIMSS 2011 asked all five emotional violence questions. PIRLS 2011 and TIMSS 2011 asked about the last 12 months. |
| Jansen, 2012 ¹² | Proxy report by teacher | Emotional | Bullying and victimization during the past three months were studied as outcome. The teacher of each elementary school child rated the occurrence of four victimization and four bullying items [20]. The victimization items assessed 2) whether a child was verbally victimized, such as being teased, laughed at, or called names (verbal victimization); etc |
| Undheim, 2010 ¹⁰ | Children's self reports | Emotional | "I am made a fool of, teased in a painful way, or somebody has said mean things to me (teasing); Rated on a 0- to 5-point scale from never to more than three times a week during the past 6 months, in school or on the way to school. Reported for 12 to 15 year olds, included in analysis as 14 years. |
| Serra-Negra, 2015 ¹³ | Children's self reports | Emotional | Prior to the application of the questionnaire, the adolescents received explanations about what school bullying actually entails. Verbal school bullying was considered to be the occurrence of episodes in which the teen was bullied or harassed by a colleague or a group of adolescents in the school. Repeated provocation was also considered as verbal school bullying. Being a victim of verbal school bullying was identified using the following question, taken from the Brazilian National School-Based Adolescent Health Survey (PeNSE): In the last thirty days, have some of your classmates bullied or mocked you so much that you got hurt/annoyed/upset? The response options were as follows: 1) never; 2) rarely; 3) always or almost always. Reported prevalence for 13 to 15 year olds, included in analysis as 14 years. |

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| Data source | Notes | Form of Violence | Definition of violence |
|-------------------------------|-------------------------|------------------|---|
| Marsh, 2010 ⁹ | Children's self reports | Emotional | Participants reported the frequency with which they themselves had both experienced this year at school: teasing/name calling. Item responses were on a 4-point scale with 1=often and 4=never. 12 month recall. |
| Landstedt, 2011 ¹⁴ | Children's self reports | Emotional | During the past 12 months, participant experienced one or several of the following acts in school: Been socially excluded; Experienced somebody spreading false rumours about you and/or Experienced racist comments or actions. This definition of bullying only addresses emotional violence. |

3.6 Partner physical violence, data source per age- girls

| age | DHS | Sys Rev | GSS | RHS | VACS | WHO VAW | Total |
|--------------|-----|---------|-----|-----|------|---------|-------|
| 15 | 26 | 2 | 1 | 5 | 2 | 2 | 38 |
| 16 | 47 | 1 | 1 | 6 | 2 | 5 | 62 |
| 17 | 56 | 5 | 0 | 6 | 2 | 8 | 77 |
| 18 | 62 | 0 | 0 | 6 | 2 | 10 | 80 |
| 19 | 65 | 0 | 0 | 6 | 2 | 11 | 84 |
| Total | 256 | 8 | 2 | 29 | 10 | 36 | 341 |

3.7 Partner physical violence question definitions, against girls

| Data source | Notes | Form of Violence | Definition of violence |
|--|---|------------------|---|
| Demographic and Health Survey (DHS) ² | Children's self reports. Three questions. | Physical | 1) thrown something at her 2) beaten her up, 3) threatened her with a gun. |
| DHS ² | Children's self reports. Six questions. | Physical | 1) pushed her, shaken her, thrown something at her, 2) slap her or twist her arm, 3) punched her with his fist or with something that could hurt her 4) kicked her, dragged her, 5) tried to strangle her or burn her, 6) threatened her with a knife, gun or other type of weapon. |
| DHS ² | Children's self reports. Seven questions: | Physical | 1) pushed her, hit her, thrown something at her 2) slapped her, 3) twisted her arm, or pulled her hair 4) punched her with his fist or with something that could hurt her 5) kicked her, dragged her, 6) tried to choke her or burn her, or 7) threatened or attacked her with a knife, gun or other type of weapon. |
| DHS ² | Children's self reports. Eight questions. | Physical | 1) pushed her, shaken her, thrown something at her 2) slapped her, 3) punched her with his fist or with something that could hurt her 4) kicked her, dragged her or beaten her up, 5) tried to choke her or burn her, or 6) threatened with a knife, gun or other type of weapon, 7) attacked with a knife, gun or other type of weapon, 8) bitten her. |
| Reproductive Health Survey (RHS) ¹⁵ | Children's self reports. Five questions. | Physical | 1) pushed her, shaken her, or threw something at her, 2) slapped her or twisted her arm, 3) hit her with his fist or something else that could hurt her, 4) kicked her, dragged her, or beat her up, 5) threatened to use a knife, gun, or another object to hurt her. |

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|------------------|--|
| RHS ¹⁵ | Children's self reports. Five questions. | Physical | 1) slapped her or threw something at her that could hurt her, 2) pushed her, shoved her, or pulled her hair, 3) hit her with his fist or with something else that could hurt her, 4) kicked her, dragged her or beat her up, 5) tried to choke or burn her on purpose |
| RHS ¹⁵ | Children's self reports. Six questions. | Physical | 1) slapped her or threw something at her that could hurt her, 2) pushed her, shoved her, or pulled her hair, 3) hit her with his fist or something else that could hurt her, 4) kicked her, dragged her, or beat her up, 5) tried to choke or burn her on purpose, 6) threatened to use or has used a gun, knife or other weapon against her |
| Violence against Children Survey (VACS) ⁴ | Children's self reports. | Physical | 1) slap or push, 2) punch, kick, whip or beat, 3) threaten or use a weapon. |
| WHO Multi-Country Study on Women's Health and Domestic Violence ¹⁶ | Children's self reports. | Physical | Slapped you or thrown something at you that could have hurt you, pushed you or shoved you, Hit you with his fist or with something else that could have hurt you, kicked you, dragged you or beaten you up, choked or burnt you on purpose, threatened to use or actually used a gun, knife or other weapon against you. |
| Good Schools Study (GSS) | Children's self reports. | Physical | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI) 1) Twisted your arm or any other body part, slapped you, pushed you or thrown something at you? 2) Punched you, kicked you, or hit you with a closed fist? 3) Hit you with an object, such as a stick or a cane, or whipped you? 4) Cut you with a sharp object or burnt you? |
| Ackerson, 2008 ¹⁷ | Children's self reports. | Physical | How often have you been beaten or mistreated physically in the last 12 months: once, a few times, many times, or not at all? A woman was considered to have experienced recent IPV if she reported being physically abused by her husband in the previous 12 months. Reported prevalence for 15 to 19 year olds, included in analysis as 17 years. |
| Blitchtein-Winicki, 2012 ¹⁸ | Children's self reports. | Physical | Recent physical violence (within the past 12 months) from a partner" to assess prevalence of women having suffered any kind of physical aggression from a partner. This was measured by a scale of 9 questions about the most recent husband's actions in the past 12 months: Did he push, hit, or throw something at you? Did he slap you or twist your arm? Did he hit you with a fist or something that would hurt you? Did he kick or drag you? Did he strangle or burn you? Did he attack/assault you? Did he |

| Data source | Notes | Form of Violence | Definition of violence |
|-------------------------------|--------------------------|------------------|--|
| | | | threaten you with a knife, gun, or other weapon? Did he use physical force to force you to have sex, even if you did not want to? Did he force you to perform sexual acts that you did not consent to? If the answer was "Yes," the survey asked, "How often did this happen in the past 12 months?". Reported prevalence for 15 to 19 year olds, included in analysis as 17 years. |
| Dalal, 2013 ¹⁹ | Children's self reports. | Physical | The survey data collected on IPV in the recent 12 months (with the latest/current husband) were transformed into the following variable: Moderate physical violence: had the husband ever pushed, shaken or thrown something; ever slapped; ever punched with a fist or something harmful; ever kicked or dragged. Reported prevalence for 15 to 19 year olds, included in analysis as 17 years. |
| Silverman, 2004 ²⁰ | Children's self reports. | Physical | Physical dating violence against adolescent girls was assessed by inquiring as follows: during the past 12 months, did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose? |
| Spriggs, 2009 ²¹ | Children's self reports. | Physical | The first was based on three items from the Conflict Tactics Scale (CTS2) that were included in the Wave II in-home questionnaire. For up to six romantic and/or sexual relationships reported since the last interview (approximately 18 months), respondents were asked if their partner had ever: (1) threatened them with violence; (2) thrown something at them that could hurt them; and/or (3) pushed or shoved them. A dichotomous summary variable (Any Victimization) was constructed indicating whether any of these experiences occurred in any of the relationships reported by the respondent. Reported prevalence for 13 to 17 year olds, included in analysis as 15 years. |
| Zablotska, 2009 ²² | Children's self reports. | Physical | Regarding physical violence, women were asked: Has any of your sexual partners ever and in the past 12 months, has your husband/partner: Verbally abused or shouted at you? Pushed, pulled, slapped or held you down? Punched you? Kicked or dragged you? Tried to strangle you or burn you? Threatened or attacked you with a knife, gun or other weapon? (Yes/No for each). Physical abuse (ever and in the past 12 months) was defined as at least one positive response versus none during the specified time. Reported prevalence for 15 to 19 year olds, included in analysis as 17 years. |

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3.8 Partner emotional violence, data source per age- girls

| age | DHS | GSS | RHS | WHO VAW | Total |
|-------|-----|-----|-----|------------|-------|
| 15 | 24 | 1 | 5 | 2 | 32 |
| 16 | 45 | 1 | 6 | 5 | 57 |
| 17 | 54 | 0 | 6 | 8 | 68 |
| 18 | 59 | 0 | 6 | 10 | 75 |
| 19 | 62 | 0 | 6 | 11 | 79 |
| Total | 244 | 2 | 29 | 36 | 311 |

3.9 Partner emotional violence question definitions, against girls

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|---------------------|---|
| Demographic and Health Survey (DHS) ² | Children’s self reports. Two questions | Emotional | 1) said or done something to humiliate her in front of others, 2) harassed her. |
| DHS ² | Children’s self reports. Two questions | Emotional | 1) said or done something to humiliate her in front of others; 2) threatened to hurt or harm her or someone close to her. |
| DHS ² | Children’s self reports. Three questions | Emotional | 1) said or done something to humiliate her in front of others; 2) threatened to hurt or harm her or someone close to her; 3) insulted her or made her feel bad about herself |
| DHS ² | Children’s self reports. Three questions | Emotional | 1) said or done something to humiliate her in front of others; 2) threatened to hurt or harm her or someone close to her; 3) swear at her. |
| Reproductive Health Surveys (RHS) ¹⁵ | Children’s self reports. Two questions | Emotional | 1) insulted her or made her feel bad about herself, 2) threatened to hurt her or someone she cares about. |
| RHS ¹⁵ | Children’s self reports. Three questions | Emotional | 1) done something to humiliate her, 2) shouted at, insulted or called offensive names, 3) threatened to harm her or someone close to her. |

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|------------------|--|
| RHS ¹⁵ | Children's self reports. Four questions. | Emotional | 1) insulted her or made her feel bad about herself, 2) belittled her or humiliated her in front of others, 3) done things on purpose to scare or intimidate her (for example by the way he looks at her, how he yells or breaks things), 4) threatened to harm her or someone close to her. |
| RHS ¹⁵ | Children's self reports. Five questions. | Emotional | 1) insulted her or made her feel bad about herself, 2) belittled her or humiliated her in front of others, 3) done things on purpose to scare or intimidate her (for example by the way he looks at her, how he yells or breaks things), 4) threatened to harm her or someone close to her, 5) threatened to take away her children. |
| WHO Multi-Country Study on Women's Health and Domestic Violence ¹⁶ | Children's self reports. | Emotional | 1) Insulted you or made you feel bad about yourself, 2) Belittled or humiliated in front of other people, 3) Did thing to scare or intimidate you on purpose, 4) Threatened to hurt you or someone you cared about. |
| Good Schools Study (GSS) ³ | Children's self reports. | Emotional | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI) 1) Insulted you, or called you rude or hurtful names? 2) Accused you of witchcraft? 2) Locked you out or made you stay outside? 4) Not given you food? |

3.10 Partner sexual violence, data source per age- girls

| age | Source | | | | | Total |
|--------------|--------|---------|-----|-----|---------|-------|
| | DHS | Sys Rev | GSS | RHS | WHO VAW | |
| 15 | 26 | 0 | 1 | 5 | 2 | 34 |
| 16 | 47 | 1 | 1 | 6 | 5 | 60 |
| 17 | 55 | 2 | 0 | 6 | 8 | 71 |
| 18 | 61 | 0 | 0 | 6 | 10 | 77 |
| 19 | 64 | 0 | 0 | 6 | 11 | 81 |
| Total | 253 | 3 | 2 | 29 | 36 | 323 |

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3.11 Partner sexual violence question definitions, against girls

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|------------------|---|
| Demographic and Health Surveys (DHS) ² | Children’s self reports. One question. | Sexual | 1) physically forced her to have sexual intercourse even when she did not want to. |
| DHS ² | Children’s self reports. Two questions | Sexual | 1) physically forced her to have sexual intercourse or 2) forced her to perform any other sexual acts. |
| DHS ² | Children’s self reports. Three questions | Sexual | 1) physically forced her to have unwanted sexual intercourse or 2) forced her to perform any other unwanted sexual acts, 3) forced her with threats or in any other way to perform sexual acts she did not want to. |
| DHS ² | Children’s self reports. Four questions | Sexual | 1) physically forced her to have unwanted sexual intercourse or 2) forced her to perform any other unwanted sexual acts, 3) force you with threats or in any other way to have sexual intercourse with him or perform any other sexual acts against her will, 4) try or attempt to force, persuade or threaten her to have sexual intercourse with him or perform other sexual acts against her will. |
| Reproductive Health Surveys (RHS) ¹⁵ | Children’s self reports. One question. | Sexual | 1) made her have sexual relations when she did not want to |
| RHS ¹⁵ | Children’s self reports. Two questions. | Sexual | 1) did she ever feel forced because of fear (of her partner) to have unwanted sexual intercourse, 2) did he (they) ever use force to make her have sexual intercourse when she did not want to |
| RHS ¹⁵ | Children’s self reports. Two questions. | Sexual | 1) had unwanted sexual relations because of fear of her partner, 2) physically forced to have sexual relations when she did not want to |
| WHO Multi-Country Study on Women’s Health and Domestic Violence ¹⁶ | Children’s self reports. | Sexual | Physically forced you to have sexual intercourse when you did not want to, did you have any sexual intercourse you did not want to because you were afraid of what he might do, did he ever force you to do something that you found degrading or humiliating. |
| Good Schools Study (GSS) ³ | Children’s self reports. | Sexual | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI) |

| Data source | Notes | Form of Violence | Definition of violence |
|-------------------------------|--------------------------|------------------|--|
| | | | 1) Disturbed or bothered you by making sexual comments about you? 2) Kissed you, when you did not want them to? 3) Touched your genitals or breasts when you did not want them to, or in a way that made you uncomfortable? 4) Threaten or pressure you to make you do something sexual with them? 5) Make you have sex with them, because they threatened or pressured you? 6) Had sex with you, by physically forcing you? |
| Dalal, 2013 ¹⁹ | Children's self reports. | Sexual | The survey data collected on IPV in the recent 12 months (with the latest/current husband) were transformed into the following variable: Sexual violence: had the husband ever physically forced sex when not wanted. |
| Puri, 2012 ²³ | Children's self reports. | Sexual | The dependent variable in the multivariate analysis was whether or not the individual woman reported having experienced sexual violence by her husband in the 12 months preceding the interview. This variable was based on a series of questions that were asked in the survey these questions were: Did your husband ever physically force you to have sexual intercourse with him even when you did not want to? Was there ever a time when you were afraid to say no to sex with your husband? Did your husband ever threaten you that if you didn't have sex with him he would leave or go to another woman? Did your husband ever force you to do something sexual that you found degrading or humiliating? Women who answered affirmatively to any of these questions were counted as having experienced sexual violence. Women who answered yes to any of these questions were also asked if those experiences had occurred at all in the past 12 months, and if so how frequently. Women who responded affirmatively that they had experienced one or more of these acts in the past 12 months were categorized as having experienced sexual violence in the 12 months preceding the interview. Reported prevalence for 15 to 17 year olds, included in analysis as 16 years. |
| Zablotska, 2009 ²² | Children's self reports. | Sexual | Regarding sexual coercion, women were asked. Have any of your sexual partners ever physically forced you to have sex when you did not want to? (Yes/No) and In the past 12 months, how many times did your husband/ partner physically force you to have sex |

| Data source | Notes | Form of Violence | Definition of violence |
|-------------|-------|------------------|---|
| | | | when you did not want to? At least one event was considered as a report of sexual coercion in the past 12 months. |

3.12 Definitions for meta-analysis of physical and emotional violence from authority figures

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|------------------|--|
| Violence against Children Surveys (VACS) ⁴ | Children's self reports Authority figures | Physical | Kenya: Now let us discuss persons of authority, such as teachers, police and military. 1) Has an authority figure ever punched you, kicked you, whipped you, or beat you with an object? 2) Has an authority figure ever used or threatened to use a knife or other weapon against you? Tanzania: 1) Have you ever been punched, kicked, or whipped by teachers, policemen, religious leaders, soldiers, or other authority figures? 2) Have teachers, policemen, religious leaders, soldiers, or other authority figures ever threatened to use or actually used a gun, knife, or other weapon against you? Haiti: Now let us discuss public authority figures who you should be able to trust, such as teachers, police, other security personnel such as MINUSTAH or UNPOL, religious leaders, or community leaders. 1) Has/did a public authority figure ever punch you, kick you, whip you, or beat you with an object? 2) Has/did a public authority figure ever choke you, smother you or tried to drown you? 3) Has/did a public authority figure ever burn or scald you intentionally (including putting hot pepper in your mouth or on another body part)? 4) Has/did a public authority figure ever use or threaten to use a knife or other weapon against you? |
| Good Schools Study (GSS) ³ | Children's self reports Teachers | Physical | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI) 1) Twisted your arm or any other body part, slapped you, pushed you or thrown something at you? 2) Punched you, kicked you, or hit you with a closed fist? 3) Hit you with an object, such as a stick or a cane, or whipped you? 4) Cut you with a sharp object or burnt you? |
| Haavet, 2011 ²⁴ | Children's self reports Adults | Physical | Experienced physical violence from an adult in the last 12 months. |

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Annex 4. Covariates included in regression models

In this analysis, we sought to include a range of studies using various definitions and methodologies. We used meta-regression to correct for differences in definitions and study methods as much as possible. For each set of meta-regressions below, we describe which covariates were fit for each model and give an example of STATA 14 code used to fit these models. We do not present a table with regression coefficients and model fit statistics because a separate model was run for each age, sex, and specific form of violence (meaning the total number of models we would need to present would be in the region of 200).

4.0 Physical and emotional violence from household members

For these meta regressions, all data was drawn from the MICS and DHS (which uses the MICS survey module). These surveys utilized very similar definitions and methodological characteristics, and thus we have not adjusted for any covariates in these models. Here is an example of STATA code used to fit a meta-regression model to describe the prevalence of emotional violence by household members in 2-year-old girls:

```
xi, noomit: metareg prevt i.WHOregion if form=="emo" & perpsg=="Family" & sex=="girls" &
age==2 , wsse(sep) noconstant
```

Where: Prevt= prevalence estimate %, WHOregion = WHO region, form= form of violence, perpsg= perpetrator type, sex=sex of victim, age = age of victim in years, sep = standard error %.

Code used for emotional violence:

```
1. forvalues a= 2/14{
2. set more off
3. cd "H:\02 know violence\meta analysis\regions"
4. use emofamgirls.dta, clear
5. drop if proxy==0
6. drop if age!=`a'
7. xi, noomit: metareg prevt i.WHOregion if form=="emo" & perpsg=="Family" & sex=="girls" &
age==`a' , wsse(sep) noconstant
8. sort WHOregion
9. gen first=1 if WHOregion!=WHOregion[_n-1]
10. drop if first!=1
11. predict emofamgirls
12. predict se_est, stdp
13. gen LL=emofamgirls-1.96*se_est
14. gen UL=emofamgirls+1.96*se_est
15. l WHOregion emofamgirls LL UL
16. keep form perpsg age sex WHOregion emofamgirls LL UL se_est
17. save "H:\02 know violence\meta analysis\regions\emofamgirls_`a'_MICS.dta", replace
18. }
```

Example from log file for age 2:

```
H:\02 know violence\meta analysis\regions
(15 observations deleted)
```

(504 observations deleted)

| | | | |
|---|---------------|---|--------|
| Meta-regression | Number of obs | = | 42 |
| REML estimate of between-study variance | tau2 | = | 222.2 |
| % residual variation due to heterogeneity | I-squared_res | = | 94.83% |
| Joint test for all covariates | Model F(6,36) | = | 94.48 |
| With Knapp-Hartung modification | Prob > F | = | 0.0000 |

| prevt | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] |
|---------------|----------|-----------|-------|-------|----------------------|
| _IWHOregion_1 | 64.93803 | 4.601592 | 14.11 | 0.000 | 55.60557 74.27049 |
| _IWHOregion_2 | 43.49723 | 4.912136 | 8.86 | 0.000 | 33.53496 53.4595 |
| _IWHOregion_3 | 76.92928 | 6.19335 | 12.42 | 0.000 | 64.36858 89.48997 |
| _IWHOregion_4 | 42.71171 | 4.997839 | 8.55 | 0.000 | 32.57562 52.8478 |
| _IWHOregion_5 | 67.74983 | 10.82758 | 6.26 | 0.000 | 45.79047 89.70918 |
| _IWHOregion_6 | 51.9713 | 10.86949 | 4.78 | 0.000 | 29.92695 74.01564 |

(36 missing values generated)
(36 observations deleted)
(option xb assumed; fitted values)

| | WHOreg~n | emofam~s | LL | UL |
|----|----------|----------|----------|----------|
| 1. | AFR | 64.93803 | 55.91891 | 73.95715 |
| 2. | AMR | 43.49723 | 33.86944 | 53.12502 |
| 3. | EMR | 76.92928 | 64.79031 | 89.06824 |
| 4. | EUR | 42.71171 | 32.91594 | 52.50747 |
| 5. | SEAR | 67.74982 | 46.52776 | 88.97189 |
| 6. | WPR | 51.9713 | 30.6671 | 73.2755 |

4.1 Physical and emotional violence from students

The covariates included in meta-regression models for emotional and physical violence from students were:

- Violence definition=0 if definition, 1-x if not (1) (variable name: def_phy)
 - Definition of physical violence: hit or hurt by another student at school.
 - Definition of emotional violence: something stolen from you at school, made fun of or called names at school, left out of games or activities by other students at school, made to do things you didn't want to do by other students, someone spread lies about you at school.
- Areas mixed urban and rural=0, 1 if urban (variable name: urban)
 - Area was not included in emotional violence to simplify the model because there was almost no variation in this variable.
- Subnational =0 if national, 1 if subnational. (variable name: rep)
- Interviewer trained =0 if trained, 1 if not or unclear. (variable name: interviewer)
- Recall period=0 if 12 months, 1 if under 12 months. (variable name: recallad)
- Proxy report=0 if child self reported, 1 if proxy report. (variable name: proxy)
- Study violence missing data recorded as under 5% =0, 1 if not. (variable name: missing)
- Standard Error obtained from study=0, 1 if derived. (variable name: seissue)

Here is an example of STATA code used to fit meta-regression model to describe the prevalence of physical violence from students among 8-year-old boys:

```
xi, noomit: metareg prevt i.WHOregion i.def_phy recallad rep urban interview proxy seissue
missing if form=="emo" & perpsg=="Peer_as" & sex=="boys" & age==8, wsse(sep) noconstant
```

Where: Prevt= prevalence estimate %, WHOregion = WHO region, form= form of violence, perpsg= perpetrator type, sex=sex of victim, age = age of victim in years, sep = standard error %.

Code used for physical violence:

```
1. forvalues a= 8/18{
2. set more off
3. cd "H:\02 know violence\meta analysis\regions"
4. use phystubboys.dta, clear
5. drop if age!=`a'
6. xi, noomit: metareg prevt i.WHOregion i.def_phy recallad rep urban proxy interview seissue
missing if form=="phy" & perpsg=="Peer_as" & sex=="boys" & age==`a', wsse(sep) noconstant
7. sort WHOregion
8. gen first=1 if WHOregion!=WHOregion[_n-1]
9. drop if first!=1
10. replace def_phy=0
11. replace recallad=0
12. replace rep=0
13. replace urban=0
14. replace proxy=0
15. replace interview=0
16. replace seissue=0
17. replace missing=0
18. predict phystubboys
19. predict se_est, stdp
20. gen LL=phystubboys-1.96*se_est
21. gen UL=phystubboys+1.96*se_est
22. l WHOregion phystubboys LL UL
23. keep form perpsg age sex WHOregion phystubboys se_est LL UL
24. save "H:\02 know violence\meta analysis\regions\phystubboys_`a'.dta", replace
25. }
```

Example from log file for age 8

```
H:\02 know violence\meta analysis\regions
(2,105 observations deleted)
note: _IWHOregion_1 dropped because of collinearity
note: rep dropped because of collinearity
note: urban dropped because of collinearity
note: proxy dropped because of collinearity
note: interview dropped because of collinearity
```

| | | | |
|---|----------------|---|--------|
| Meta-regression | Number of obs | = | 52 |
| REML estimate of between-study variance | tau2 | = | 227.1 |
| % residual variation due to heterogeneity | I-squared_res | = | 78.04% |
| Joint test for all covariates | Model F(10,42) | = | 34.29 |
| With Knapp-Hartung modification | Prob > F | = | 0.0000 |

| | prevt | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|---------------|-------|-----------|-----------|-------|-------|----------------------|-----------|
| _IWHOREGION_2 | | 15.9216 | 13.8489 | 1.15 | 0.257 | -12.02661 | 43.86981 |
| _IWHOREGION_3 | | 15.70263 | 13.41972 | 1.17 | 0.249 | -11.37946 | 42.78472 |
| _IWHOREGION_4 | | 9.694549 | 14.51083 | 0.67 | 0.508 | -19.58949 | 38.97859 |
| _IWHOREGION_5 | | 20.77766 | 17.91199 | 1.16 | 0.253 | -15.3702 | 56.92552 |
| _IWHOREGION_6 | | 29.17286 | 16.16236 | 1.80 | 0.078 | -3.444109 | 61.78982 |
| _IDEF_PHY_0 | | 39.06331 | 15.01724 | 2.60 | 0.013 | 8.757285 | 69.36933 |
| _IDEF_PHY_4 | | 42.9 | 16.02697 | 2.68 | 0.011 | 10.55626 | 75.24373 |
| recallad | | -21.28366 | 6.288703 | -3.38 | 0.002 | -33.97478 | -8.592546 |
| seissue | | -3.862676 | 21.16843 | -0.18 | 0.856 | -46.5823 | 38.85695 |
| missing | | 4.050647 | 6.343839 | 0.64 | 0.527 | -8.751739 | 16.85303 |

(46 missing values generated)
(46 observations deleted)
(3 real changes made)
(5 real changes made)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(3 real changes made)
(option xb assumed; fitted values)

| | WHOreg~n | phystu~s | LL | UL |
|----|----------|----------|----------|----------|
| 1. | AFR | 42.9 | 11.48714 | 74.31286 |
| 2. | AMR | 58.82159 | 39.50122 | 78.14197 |
| 3. | EMR | 54.76594 | 40.79076 | 68.74113 |
| 4. | EUR | 48.75785 | 38.01067 | 59.50504 |
| 5. | SEAR | 63.67765 | 36.78078 | 90.57452 |
| 6. | WPR | 68.23617 | 48.23888 | 88.23345 |

file H:\02 know violence\meta analysis\regions\phystuboyes_8.dta saved

4.2 Physical, emotional and sexual violence from intimate partners

The covariates included in meta-regression models for physical violence from partners were:

- Subnational =0 if national, 1 if subnational.
- Sample from community=0, 1 if school. (variable name: samp)
- Interviewer trained =0 if trained, 1 if not or unclear.
- Recall period=0 if 12 months, 1 if not.*
- Violence definition gold standard 0, 1 if not. (variable name: acts)
 - DHS, RHS, WHO VAW and Publications that asked about 5 or more acts of physical violence were set as the gold standard e.g.: DHS 1) pushed her, shaken her, thrown something at her, 2) slap her or twist her arm, 3) punched her with his fist or with something that could hurt her 4) kicked her, dragged her, 5) tried to strangle her or burn her, 6) threatened her with a knife, gun or other type of weapon.

* one estimate for approximately 18 month recall (age 15).

The covariates included in meta-regression models for emotional violence from partners were:

- Violence definition gold standard 0, 1 if not.

- DHS, RHS, WHO VAW definition was set as the gold standard; some variation but all DHS/RHS ask 2 or 3 modified CTS questions and WHO VAW 4 questions, e.g. DHS: 1) said or done something to humiliate her in front of others; 2) threatened to hurt or harm her or someone close to her; 3) insulted her or made her feel bad about herself.

The covariates included in meta-regression models for sexual violence from partners were:

- Subnational =0 if national, 1 if subnational.
- Sample from community=0, 1 if school
- Area mixed urban and rural =0, rural=1
- Violence definition gold standard =0, 1 if not.
 - DHS surveys only with 3 or more sexual violence questions and WHO VAW surveys which asked 4 questions were considered gold standard e.g.: DHS with the minimum number of 3 questions: 1) physically forced her to have unwanted sexual intercourse or 2) forced her to perform any other unwanted sexual acts, 3) forced her with threats or in any other way to perform sexual acts she did not want to.

Here are examples of STATA code used to fit meta-regression model to describe the prevalence of physical, emotional and sexual violence from students among 17-year-old girls:

Physical:

```
xi, noomit: metareg prevps i.WHOregion rep acts samp interview recallad if form=="phy" &
perpsg=="Partner" & sex=="girls" & age==17, wsse(sep) noconstant
```

Emotional:

```
xi, noomit: metareg prevps i.WHOregion acts if form=="emo" & perpsg=="Partner" & sex=="girls"
& age==17, wsse(sep) noconstant
```

Sexual:

```
xi, noomit: metareg prevps i.WHOregion acts rep samp urban if form=="sex" & perpsg=="Partner"
& sex=="girls" & age==17, wsse(sep) noconstant
```

Where: Prevs= percentage prevalence estimate adjusted by proportion of country population ever had sex by aged 20, sep = standard error %, form= form of violence, perpsg= perpetrator subgroup.

Code used for physical violence:

```
1. forvalues a= 15/19{
2. set more off
3. cd "H:\02 know violence\meta analysis\regions"
4. use phyipvgirls_220817.dta, clear
5. drop if age!=`a'
6. xi, noomit: metareg prevps i.WHOregion rep acts samp interview recallad if form=="phy" &
perpsg=="Partner" & sex=="girls" & age==`a', wsse(sep) noconstant
7. sort WHOregion
8. gen first=1 if WHOregion!=WHOregion[_n-1]
9. drop if first!=1
10. replace rep=0
```



```
11. replace acts=0
12. replace samp=0
13. replace interview=0
14. replace recallad=0
15. predict phyipvgirls
16. predict se_est, stdp
17. gen LL=phyipvgirls-1.96*se_est
18. gen UL=phyipvgirls+1.96*se_est
19. l WHOregion phyipvgirls LL UL
20. keep form perpsg age sex WHOregion phyipvgirls se_est LL UL
21. save "H:\02 know violence\meta analysis\regions\age\phyipvgirls_`a'_220817.dta", replace
22. }
```

Example of log file age 17

H:\02 know violence\meta analysis\regions
(264 observations deleted)
note: recallad dropped because of collinearity

| | | | |
|---|----------------|---|--------|
| Meta-regression | Number of obs | = | 77 |
| REML estimate of between-study variance | tau2 | = | 66.99 |
| % residual variation due to heterogeneity | I-squared_res | = | 81.76% |
| Joint test for all covariates | Model F(10,67) | = | 16.18 |
| With Knapp-Hartung modification | Prob > F | = | 0.0000 |

| premps | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|---------------|-----------|-----------|-------|-------|----------------------|----------|
| -----+----- | | | | | | |
| _IWHOregion_1 | 17.47243 | 1.857947 | 9.40 | 0.000 | 13.76395 | 21.1809 |
| _IWHOregion_2 | 12.19227 | 2.080327 | 5.86 | 0.000 | 8.039918 | 16.34462 |
| _IWHOregion_3 | 11.60345 | 5.843056 | 1.99 | 0.051 | -.0593398 | 23.26624 |
| _IWHOregion_4 | 6.267187 | 8.404799 | 0.75 | 0.458 | -10.50886 | 23.04324 |
| _IWHOregion_5 | 17.61386 | 3.435086 | 5.13 | 0.000 | 10.7574 | 24.47032 |
| _IWHOregion_6 | 5.44586 | 6.042861 | 0.90 | 0.371 | -6.615742 | 17.50746 |
| rep | 2.027575 | 8.493479 | 0.24 | 0.812 | -14.92548 | 18.98063 |
| acts | -9.205742 | 5.978464 | -1.54 | 0.128 | -21.13881 | 2.727321 |
| samp | 3.227722 | 13.22067 | 0.24 | 0.808 | -23.16085 | 29.6163 |
| interview | 2.585753 | 8.688076 | 0.30 | 0.767 | -14.75572 | 19.92722 |
| -----+----- | | | | | | |

(71 missing values generated)
(71 observations deleted)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(option xb assumed; fitted values)

| | WHOreg~n | phyipv~s | LL | UL |
|----|----------|----------|-----------|----------|
| 1. | AFR | 17.47243 | 13.83085 | 21.114 |
| 2. | AMR | 12.19227 | 8.114827 | 16.26971 |
| 3. | EMR | 11.60345 | .1510596 | 23.05584 |
| 4. | EUR | 6.267187 | -10.20622 | 22.74059 |
| 5. | SEAR | 17.61386 | 10.88109 | 24.34663 |
| 6. | WPR | 5.44586 | -6.398149 | 17.28987 |

Annex 5: Pooled meta-regression prevalence estimates of violence against children, with 95% confidence interval

Figure 5.0. Prevalence of physical and emotional violence ever perpetrated by students against boys and girls, by age of child (based on self-report)

| age | Boys Emotional | | | Boys Physical | | |
|-----|----------------|-------|-------|---------------|-------|-------|
| | Prev% | LCI | UCI | Prev% | LCI | UCI |
| 18 | 32.35 | 27.13 | 37.57 | 11.10 | 4.24 | 17.95 |
| 17 | 52.11 | 46.13 | 58.09 | 20.98 | 16.16 | 25.81 |
| 16 | 51.31 | 47.35 | 55.27 | 19.21 | 16.15 | 22.27 |
| 15 | 52.97 | 49.71 | 56.22 | 22.06 | 19.37 | 24.76 |
| 14 | 54.54 | 51.67 | 57.41 | 24.58 | 21.91 | 27.25 |
| 13 | 55.37 | 52.08 | 58.66 | 26.10 | 23.46 | 28.74 |
| 12 | 56.43 | 52.36 | 60.50 | 31.51 | 27.84 | 35.18 |
| 11 | 83.27 | 78.23 | 88.31 | 51.13 | 47.43 | 54.83 |
| 10 | 83.37 | 79.32 | 87.42 | 53.22 | 49.13 | 57.31 |
| 9 | 82.21 | 77.25 | 87.17 | 53.76 | 48.68 | 58.85 |
| 8 | 73.42 | 63.18 | 83.67 | 53.75 | 42.70 | 64.80 |

| age | Girls Emotional | | | Girls Physical | | |
|-----|-----------------|-------|-------|----------------|-------|-------|
| | Prev% | LCI | UCI | Prev% | LCI | UCL |
| 18 | 27.90 | 21.66 | 34.15 | 9.22 | 3.51 | 14.94 |
| 17 | 55.25 | 44.27 | 66.23 | 17.70 | 9.69 | 25.71 |
| 16 | 51.38 | 46.61 | 56.15 | 16.35 | 13.19 | 19.51 |
| 15 | 53.84 | 50.23 | 57.45 | 16.56 | 13.85 | 19.28 |
| 14 | 53.22 | 50.16 | 56.29 | 15.64 | 11.92 | 19.36 |
| 13 | 52.90 | 49.94 | 55.86 | 16.72 | 13.75 | 19.68 |
| 12 | 54.88 | 50.19 | 59.57 | 23.56 | 19.60 | 27.52 |
| 11 | 80.18 | 75.45 | 84.91 | 39.94 | 35.93 | 43.94 |
| 10 | 78.72 | 74.54 | 82.91 | 42.89 | 38.79 | 46.99 |
| 9 | 79.33 | 74.62 | 84.03 | 43.67 | 38.79 | 48.55 |
| 8 | 74.84 | 66.64 | 83.04 | 48.97 | 40.77 | 57.17 |

Abbreviations: Prev%: Prevalence estimate; LCI: Lower 95% confidence interval; UCI: Upper 95%CI

Figure 5.1. Prevalence of physical and emotional violence ever perpetrated by household members against boys and girls, by age of child (based on proxy report from household member)

| age | Boys Emotional | | | Boys Physical | | |
|-----|----------------|-------|-------|---------------|-------|-------|
| | Prev% | LCI | UCI | Prev% | LCI | UCI |
| 14 | 67.89 | 60.94 | 74.84 | 40.87 | 33.8 | 47.94 |
| 13 | 72.12 | 65.93 | 78.32 | 47.7 | 39.61 | 55.79 |
| 12 | 73.24 | 66.44 | 80.04 | 53.08 | 45.53 | 60.62 |
| 11 | 75.11 | 67.97 | 82.24 | 54.2 | 46.5 | 61.9 |
| 10 | 75.76 | 68.51 | 83.01 | 57.32 | 49.66 | 64.97 |
| 9 | 74.56 | 67.48 | 81.64 | 61.69 | 54.39 | 68.99 |
| 8 | 74.46 | 67.08 | 81.85 | 60.86 | 53.12 | 68.6 |
| 7 | 74.36 | 67.30 | 81.43 | 64.67 | 57.71 | 71.63 |
| 6 | 72.96 | 66.56 | 79.37 | 64.99 | 57.36 | 72.63 |
| 5 | 72.60 | 65.27 | 79.93 | 65.25 | 57.85 | 72.64 |
| 4 | 69.99 | 62.79 | 77.19 | 64.79 | 58.46 | 71.13 |
| 3 | 68.24 | 60.84 | 75.64 | 63.28 | 56.62 | 69.94 |
| 2 | 61.16 | 53.37 | 68.95 | 58.65 | 51.76 | 65.54 |

| age | Girls Emotional | | | Girls Physical | | |
|-----|-----------------|-------|-------|----------------|-------|-------|
| | Prev% | LCI | UCL | Prev% | LCI | UCI |
| 14 | 65.21 | 58.85 | 71.57 | 35.86 | 28.16 | 43.55 |
| 13 | 67.01 | 60.52 | 73.50 | 40.06 | 32.47 | 47.65 |
| 12 | 70.60 | 64.01 | 77.18 | 46.14 | 38.18 | 54.11 |
| 11 | 70.38 | 63.74 | 77.03 | 47.20 | 39.01 | 55.39 |
| 10 | 71.52 | 64.06 | 78.98 | 52.80 | 45.46 | 60.15 |
| 9 | 73.47 | 66.95 | 79.99 | 55.53 | 47.09 | 63.97 |
| 8 | 72.56 | 65.85 | 79.26 | 57.46 | 50.53 | 64.39 |
| 7 | 73.72 | 66.97 | 80.47 | 60.83 | 52.90 | 68.75 |
| 6 | 71.07 | 63.98 | 78.15 | 60.38 | 52.75 | 68.01 |
| 5 | 70.91 | 63.30 | 78.52 | 60.58 | 52.93 | 68.22 |
| 4 | 69.93 | 62.66 | 77.21 | 63.15 | 55.98 | 70.32 |
| 3 | 65.84 | 58.54 | 73.14 | 60.87 | 54.31 | 67.43 |
| 2 | 59.85 | 52.09 | 67.61 | 56.24 | 49.20 | 63.28 |

Abbreviations: Prev%: Prevalence estimate; LCI: Lower 95% confidence interval; UCI: Upper 95%CI

Figure 5.2. Prevalence of sexual, physical and emotional violence ever perpetrated by intimate partners against girls, by age of girl (based on self-report)

| Girls Sexual | | | |
|-----------------|-------|-------|-------|
| age | Prev% | LCI | UCI |
| 19 | 5.17 | 3.29 | 7.04 |
| 18 | 5.86 | 3.67 | 8.04 |
| 17 | 3.66 | 1.99 | 5.33 |
| 16 | 3.40 | 1.21 | 5.58 |
| 15 | 1.50 | -0.34 | 3.35 |
| Girls Physical | | | |
| age | Prev% | LCI | UCI |
| 19 | 12.55 | 10.10 | 15.00 |
| 18 | 11.73 | 9.14 | 14.32 |
| 17 | 12.92 | 9.29 | 16.55 |
| 16 | 10.01 | 6.20 | 13.81 |
| 15 | 7.06 | 3.28 | 10.85 |
| Girls Emotional | | | |
| age | Prev% | LCI | UCI |
| 19 | 13.24 | 10.01 | 16.47 |
| 18 | 12.98 | 10.05 | 15.90 |
| 17 | 9.48 | 6.32 | 12.64 |
| 16 | 8.27 | 4.85 | 11.69 |
| 15 | 8.07 | 4.11 | 12.03 |

Abbreviations: Prev%: Prevalence estimate; LCI: Lower 95% confidence interval; UCI: Upper 95%CI

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Annex 7: Data sources available for prevalence of violence against children estimates

Table 7.0. Number of violence estimates (sexual, physical, emotional or neglect) per WHO region for each dataset source included in the current study

| Source | WHO region | | | | | | Total |
|----------------------|--------------------------|---------------------------|---|---------------------------|---------------------------------------|-------------------------------------|--------|
| | AFR African region | AMR Americas region | EMR Eastern Mediterranean region | EUR European region | SEAR South- east Asia region | WPR Western Pacific region | |
| DHS | 702 | 303 | 195 | 88 | 59 | 52 | 1,399 |
| RHS | 0 | 116 | 0 | 0 | 0 | 0 | 116 |
| WHO | 40 | 32 | 0 | 4 | 52 | 16 | 144 |
| MICS | 416 | 520 | 208 | 468 | 104 | 104 | 1,820 |
| VACS | 144 | 70 | 0 | 0 | 0 | 0 | 214 |
| GSHS | 394 | 506 | 278 | 236 | 28 | 248 | 1,690 |
| HBSC | 0 | 24 | 0 | 984 | 0 | 0 | 1,008 |
| PIRLS | 84 | 357 | 380 | 1,148 | 48 | 174 | 2,191 |
| TIMSS | 272 | 420 | 1,272 | 1,464 | 118 | 574 | 4,120 |
| GSS | 432 | 0 | 0 | 0 | 0 | 0 | 432 |
| Optimus | 0 | 0 | 0 | 0 | 0 | 152 | 152 |
| EU kids | 0 | 0 | 0 | 400 | 0 | 0 | 400 |
| Systematic review | 3 | 31 | 0 | 86 | 8 | 16 | 144 |
| Total | 2,487 | 2,379 | 2,333 | 4,878 | 417 | 1,336 | 13,830 |

Abbreviations: DHS: Demographic and Health Surveys; RHS: Reproductive Health Surveys; WHO: World Health Organization; MICS: Multiple Indicator Cluster Surveys; VACS: Violence against Children Surveys; GSHS: Global Student Health Surveys; HBSC: Health Behaviour in School-Aged Children; PIRLS: Progress in International Reading Literacy Study; TIMSS: Trends in International Mathematics and Science Study; GSS: Good Schools Study.

Annex 7. Number of prevalence estimates of violence against children per perpetrator grouping, by form of violence (sexual, emotional, physical, or neglect) and sex of child

Single forms of violence were selected with sex and perpetrator groupings containing an adequate number of estimates to be eligible for meta-regression or meta-analysis, over 50 estimates (dark grey), or identified for presenting un-pooled single estimates in forest plots for groupings of related perpetrators (light grey).

| Perpetrator | Sex | Single form of violence | | | Combined forms of violence | | | | | Total |
|-------------------------------|-------|-------------------------|----------|--------|----------------------------|----------------------------------|--------------------|---------------------------------|---|-------|
| | | Emotional | Physical | Sexual | Physical or emotional | Physical or emotional or neglect | Physical or sexual | Physical or emotional or sexual | Physical or emotional or sexual or witnessing | |
| Any perpetrator(4) | Boys | 19 | 21 | 52 | 19 | 0 | 0 | 0 | 1 | 112 |
| | Girls | 19 | 20 | 66 | 19 | 0 | 0 | 0 | 1 | 125 |
| Adults and authority figures: | | | | | | | | | | |
| Authority figures | Boys | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | Girls | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| Teacher | Boys | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Girls | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| Adult | Boys | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Girls | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Gang or group | Boys | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Girls | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Multiple perpetrators | Boys | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | Girls | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| Rather not say | Boys | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Girls | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| Other | Boys | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Girls | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| Other family member | Boys | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Girls | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |

| | | Single form of violence | | | Combined forms of violence | | | | | |
|---|-------|-------------------------|-----------|--------|----------------------------|----------------------------------|--------------------|---------------------------------|---|--------|
| | | | | | | Physical or emotional or neglect | Physical or sexual | Physical or emotional or sexual | Physical or emotional or sexual or witnessing | |
| Perpetrator | Sex | Emotional | Physical | Sexual | Physical or emotional | | | | | Total |
| Partner | Boys | 8 | 23 | 8 | 0 | 0 | 0 | 0 | 0 | 39 |
| | Girls | 317 | 348 | 329 | 3 | 0 | 48 | 271 | 0 | 1,316 |
| Peers | Boys | 1 | 0 | 0 | 226 | 0 | 0 | 0 | 0 | 227 |
| | Girls | 1 | 1 | 0 | 226 | 0 | 0 | 0 | 0 | 228 |
| Student | Boys | 1,555 (1) | 2,173 (2) | 16 | 895 | 0 | 0 | 0 | 0 | 4,639 |
| | Girls | 1,507 (1) | 2,108 (2) | 16 | 879 | 0 | 0 | 0 | 0 | 4,510 |
| Caregiver/ parent/ household member (3) | | | | | | | | | | |
| | Boys | 561 | 589 | 8 | 0 | 19 | 0 | 0 | 0 | 1,177 |
| | Girls | 561 | 589 | 8 | 0 | 19 | 0 | 0 | 0 | 1,177 |
| Total | Boys | 2,176 | 2,882 | 116 | 1,140 | 19 | 0 | 0 | 1 | 6,334 |
| Total | Girls | 2,437 | 3,142 | 451 | 1,127 | 19 | 48 | 271 | 1 | 7,496 |
| Total | | 4,613 | 6,024 | 567 | 2,267 | 38 | 48 | 271 | 2 | 13,830 |

(1) Emotional cyber bullying was not included in regression models estimating emotional violence perpetrated by students against other students (there were a total of 252 boy and 252 girl estimates of cyber bullying).

(2) Separate estimates for boy-student perpetrators and girl-student perpetrators were not included in meta-regression. Models presented estimate prevalence from any student irrespective of the perpetrators sex (there were 48 boy- and 48 girl-student perpetrator estimates provided).

(3) Adult proxy reports of violence from household members and children’s self-reports of violence from caregiver, parent or household member were analysed separately in meta-regression and meta-analysis, respectively.

(4) Sexual violence from any perpetrator is not presented in this paper.

Annex 8. Children's self-reports of violence perpetrated by caregivers, by age of child, data source, and country.

Figure 8.0. Prevalence of physical violence perpetrated by caregivers against girls, in the past 12 months (based on self-report)

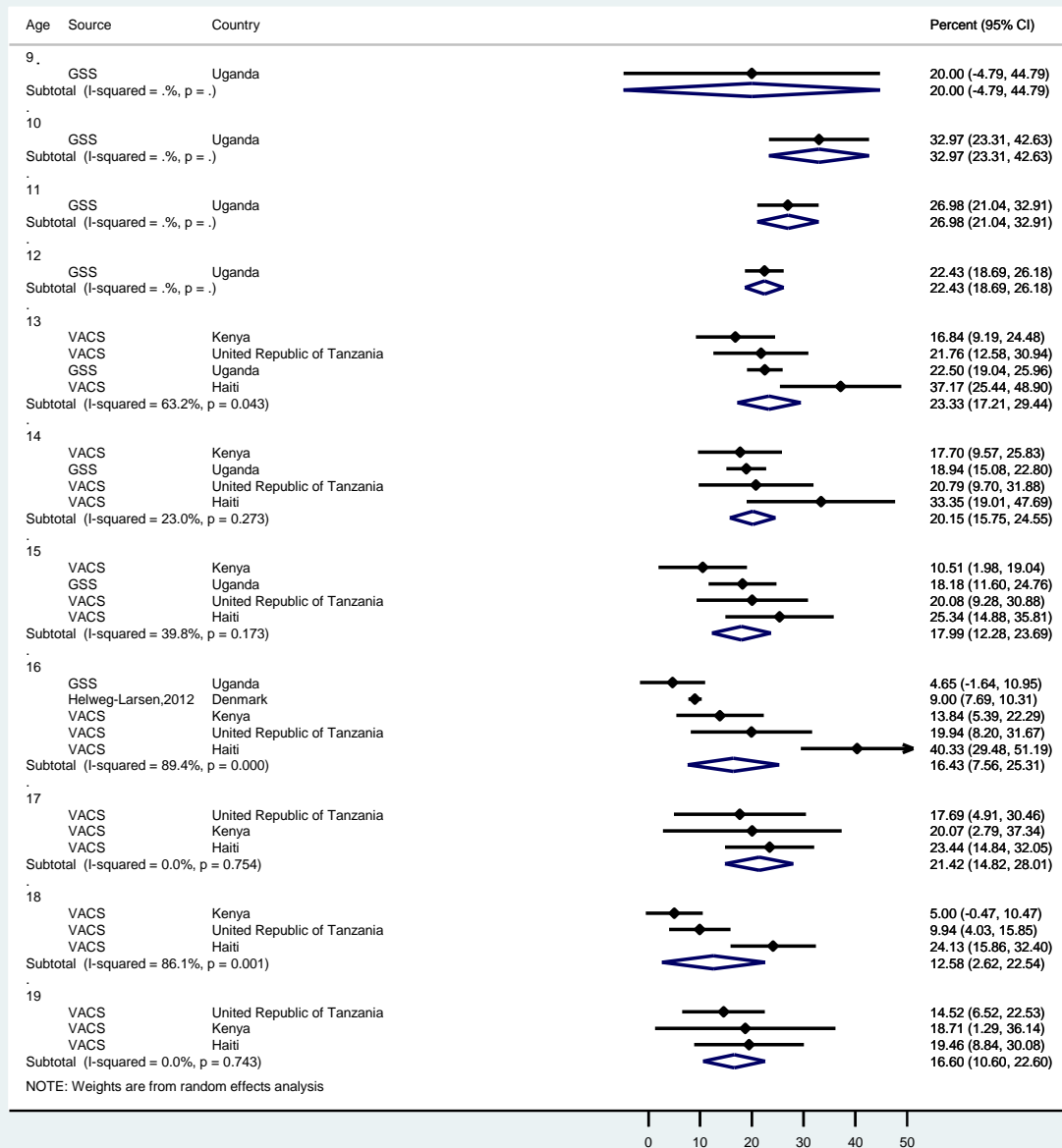


Figure 8.1. Prevalence of physical violence perpetrated by caregivers against boys, in the past 12 months (based on self-report)

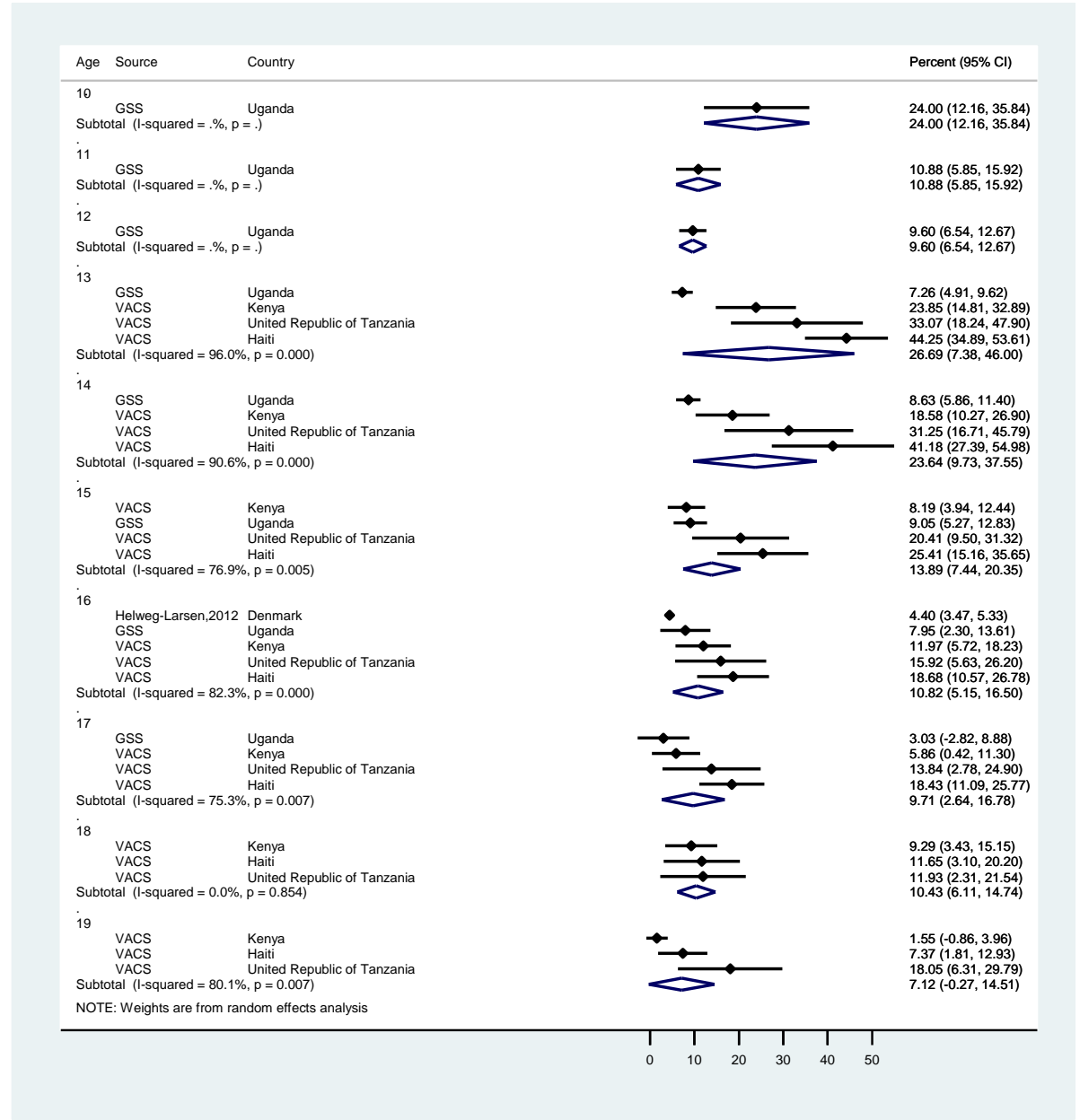


Figure 8.2. Prevalence of emotional violence perpetrated by caregivers against girls, in the past 12 months (based on self-report)

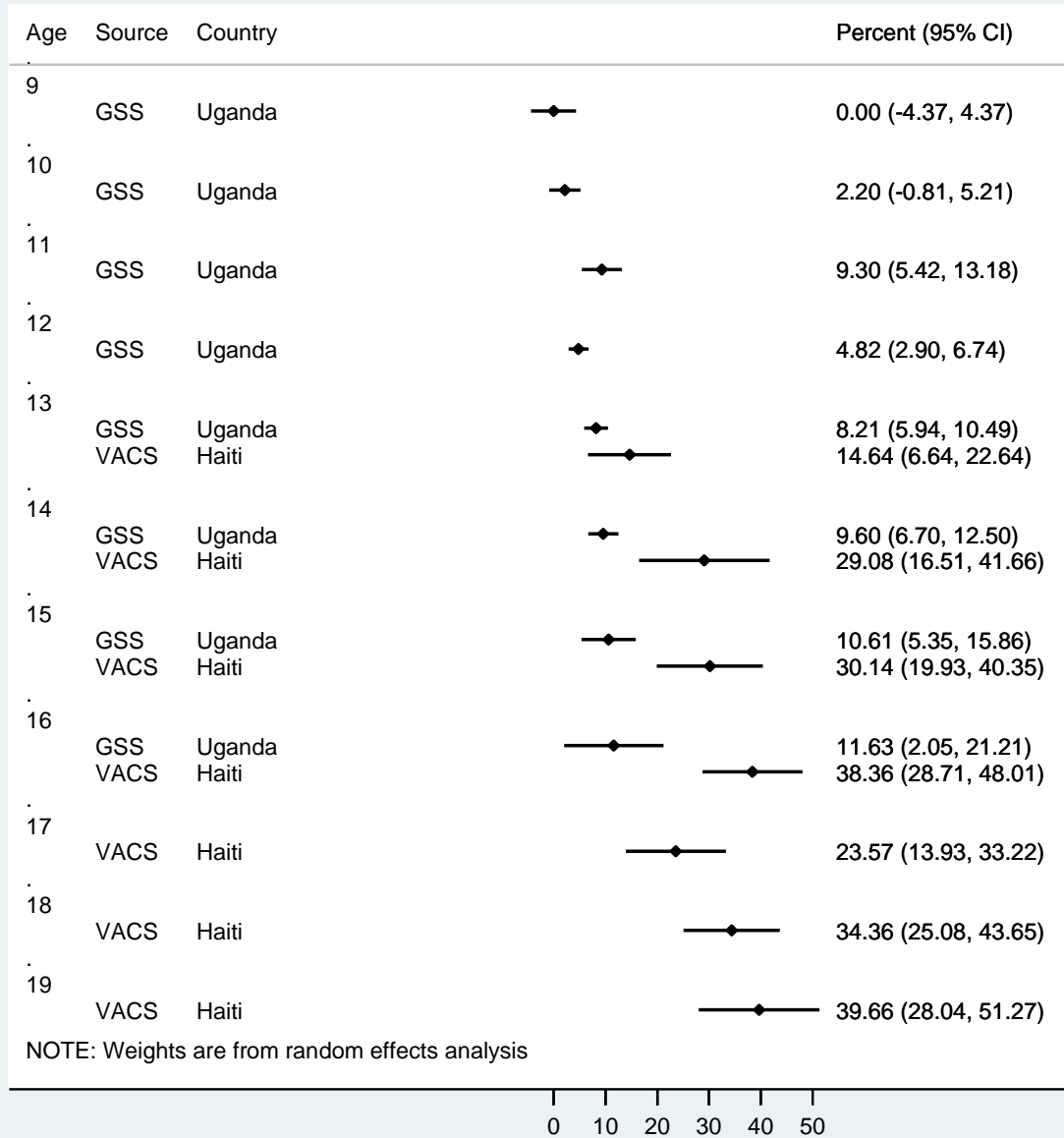
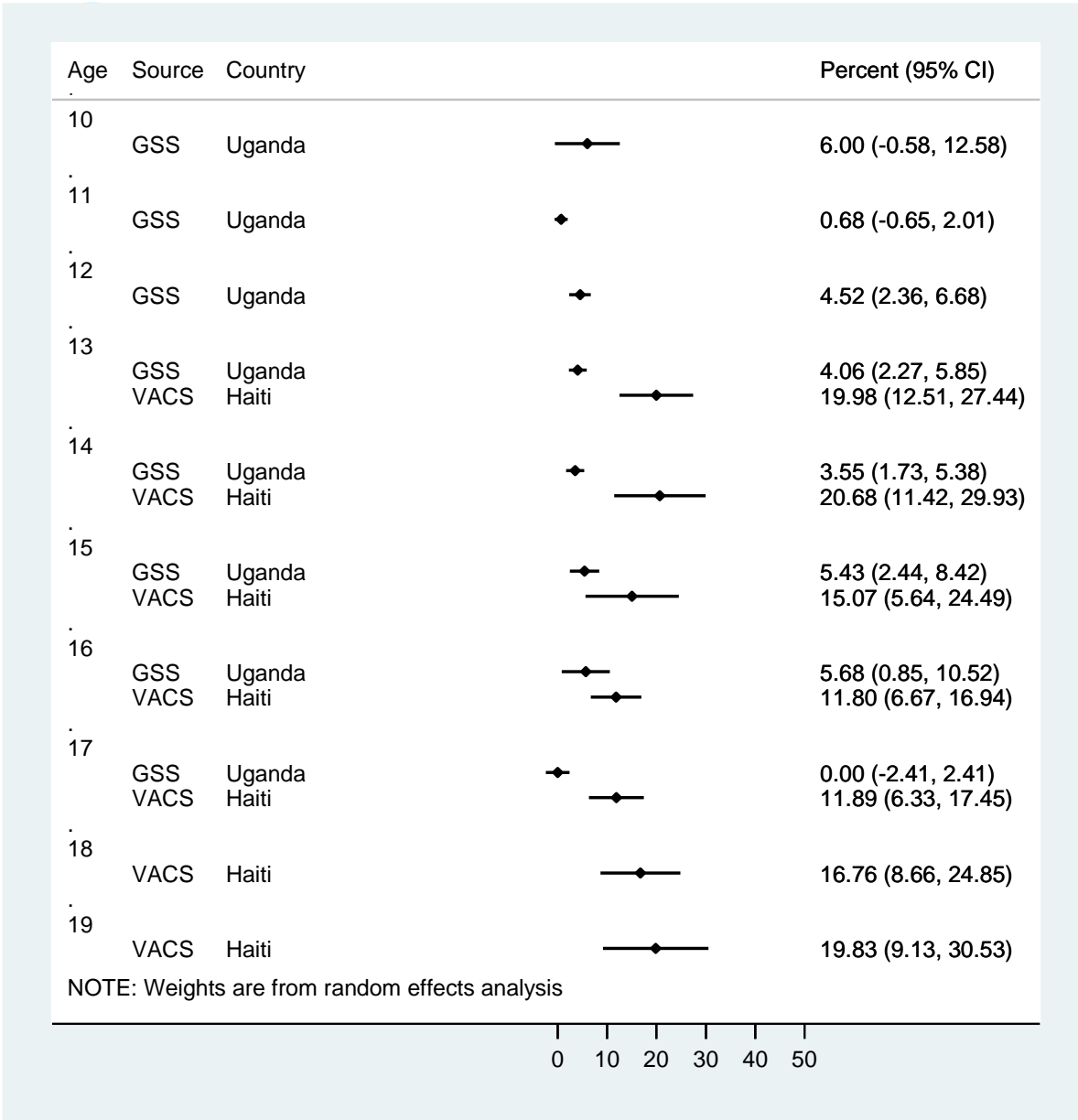
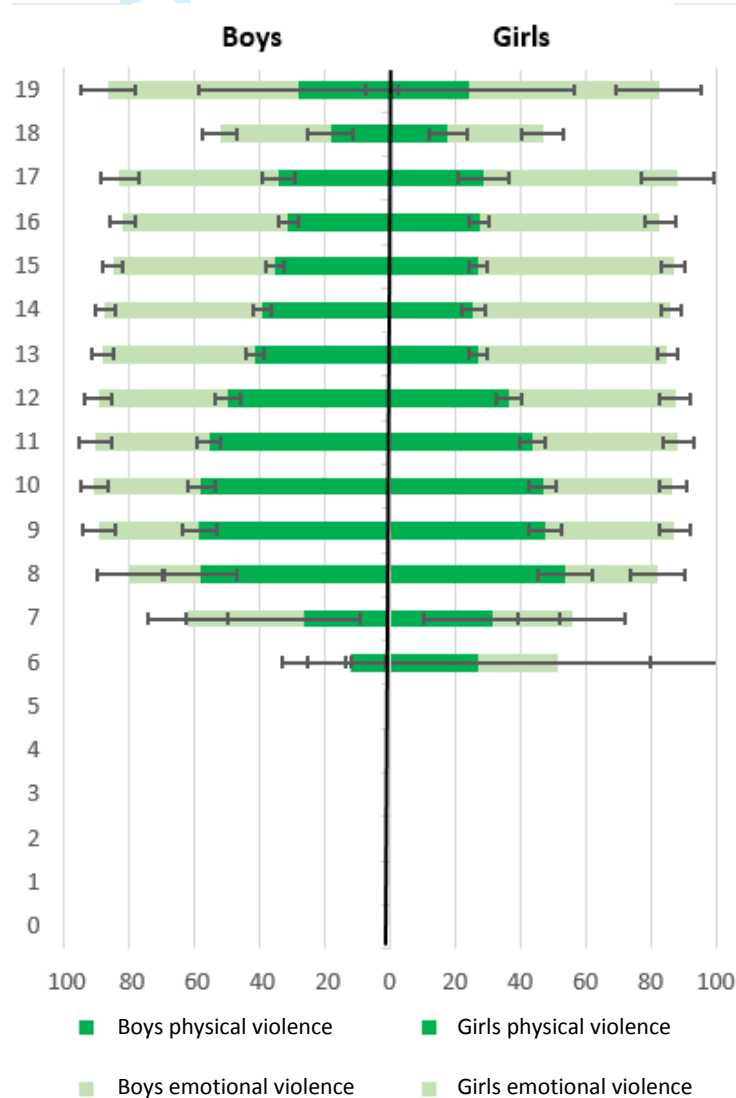


Figure 8.3. Prevalence of emotional violence perpetrated by caregivers against boys, in the past 12 months (based on self-report)



Annex 9. Physical and emotional violence perpetrated by students against boys and girls in school and physical, emotional and sexual partner violence against girls among ever partnered girls.

Figure 9.1. Prevalence of physical and emotional violence perpetrated by students against boys and girls in school in the past year (based on self-report).



Notes: Estimates provided without adjustment for the WHO regional estimation proportion of students attending primary and secondary schools. Data sources: Global School-Based Health Surveys (GSHS), Health Behaviour in School-Aged Children (HBSC), Progress in International Reading Literacy Study (PIRLS), Trends in International Mathematics and Science Study (TIMSS) and systematic review publications. Definitions are provided in Annex 3. Pooled prevalence estimates at ages 6, 7 and 19 years are from unadjusted meta-analyses, all others are adjusted meta-regression estimates. To read bar graph: age of the child is on the y-axis; prevalence of each form of violence is on the x axis. Prevalence corresponds to the distance of the bar along the x-axis for boys (to the left), and girls (to the right). Forms of violence are overlaid; and the black bars are a 95% confidence interval.

Figure 9.2. Prevalence of physical, emotional and sexual partner violence against girls, estimated by age and for ever partnered girls.

| Violence type | sex | age | Global estimate | lower CI | Upper CI |
|---------------|-------|-----|-----------------|----------|----------|
| Physical | girls | 15 | 9.15 | 3.73 | 14.57 |
| Physical | girls | 16 | 13.78 | 8.60 | 18.95 |
| Physical | girls | 17 | 15.60 | 10.46 | 20.74 |
| Physical | girls | 18 | 15.02 | 11.27 | 18.76 |
| Physical | girls | 19 | 15.60 | 12.17 | 19.04 |
| Emotional | girls | 15 | 11.91 | 5.79 | 18.04 |
| Emotional | girls | 16 | 15.49 | 10.09 | 20.88 |
| Emotional | girls | 17 | 11.21 | 7.51 | 14.91 |
| Emotional | girls | 18 | 16.34 | 12.69 | 19.99 |
| Emotional | girls | 19 | 19.05 | 14.69 | 23.41 |
| Sexual | girls | 15 | 1.89 | 0.00 | 4.34 |
| Sexual | girls | 16 | 6.96 | 2.52 | 11.40 |
| Sexual | girls | 17 | 5.10 | 2.32 | 7.89 |
| Sexual | girls | 18 | 8.38 | 5.36 | 11.39 |
| Sexual | girls | 19 | 6.29 | 3.50 | 9.08 |

Notes: Ever partnered definition covariate in regression models: Study denominator definitions were categorised into similar groups creating a variable called “popug”, where 0= ever married/ever partnered, and 1 currently married, 2 currently married/current partner, 3 currently married, 5 general population. Popug was added as a covariate in the meta-regression models, for example for partner physical violence: xi, noomit: metareg prevp i.WHOregion i.popug rep acts samp interview recallad if form=="phy" & perpsg=="Partner" & sex=="girls" & age=="a", wsse(sep) noconstant

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Who perpetrates violence against children? A systematic analysis of age and sex specific data

| | |
|-------------------------------|--|
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| Keywords: | Epidemiology, Adolescent Health, Child Abuse, Children's Rights, School Health |
| | |

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Who perpetrates violence against children? A systematic analysis of age and sex specific data

Authors: Karen Devries, Louise Knight, Max Petzold, Katherine G Merrill, Lauren Maxwell, Abigail Williams, Claudia Cappa, Ko Ling Chan, Claudia Garcia-Moreno, NaTasha Hollis, Howard Kress, Amber Peterman, Sophie D Walsh, Sunita Kishor, Alessandra Guedes, Sarah Bott, Betzabé Butrón, Charlotte Watts, Naeemah Abrahams

London School of Hygiene & Tropical Medicine, London, WC1E 7HT, UK: Karen Devries Associate Professor, Louise Knight Research Fellow and Charlotte Watts Professor. Health Metrics at Sahlgrenska Academy, PO Box 414, University of Gothenburg, 405 30 Gothenburg, Sweden: Max Petzold Professor. Johns Hopkins University, Baltimore, MD 21218, USA: Katherine G Merrill PhD Candidate. McGill University, Montréal, QC H3A 0G4, Canada: Lauren Maxwell PhD Candidate. Brunel University, Uxbridge UB8 3PH, UK: Abigail Williams BSc student. UNICEF, Data and Analytics Section, Division of Data, Research and Policy, New York, NY 10017, USA: Claudia Cappa Statistics Specialist. Department of Applied Social Sciences, The Hong Kong Polytechnic University, Hong Kong, China, Ko Ling Chan Professor. World Health Organization, Switzerland, Claudia Garcia-Moreno. US Centers for Disease Control, USA, NaTasha Hollis Epidemiologist and Howard Kress team lead for the Violence Against Children and Youth team. UNICEF Office of Research—Innocenti, Piazza SS. Annunziata 12, 50122 Florence, Italy: Amber Peterman Social Policy Specialist. Bar-Ilan University, Israel: Sophie D Walsh Clinical Psychologist and Associate Professor. ICF, The DHS Program, USA: Sunita Kishor Director of the Demographic and Health Surveys (DHS) Program. Pan-American Health Organization, USA: Alessandra Guedes Regional Adviser on Intra-Family Violence and Betzabé Butrón, Regional advisor on child health and Sarah Bott Independent Consultant. South African Medical Research Council, South Africa: Naeemah Abrahams Deputy Director of the Gender and Health Research Unit, South African Medical Research Council P O Box 19070 Tygerberg 7405 Cape Town South Africa.

Corresponding author: Louise Knight email address: louise.knight@lshtm.ac.uk Tel: 0207 612 7908

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Keywords: violence against children, child abuse, intimate partner violence, bullying, school violence

Reference count: 29

Author contributions:

Karen Devries designed the study, conducted data analysis, drafted the manuscript, and obtained funding. Louise Knight input into the design of the study, conducted data analysis, performed the overall data synthesis, and drafted the graphics and annexes. Max Petzold provided input into the statistical methods and data synthesis, and conducted data analysis. Kate Merrill and Lauren Maxwell conducted the systematic review, and conducted data analysis. Abigail Williams assisted with the systematic review. Claudia Cappa, Edward Chan, Natasha Hollis, Howard Kress, Amber Peterman, Sophie D Walsh, Claudia Garcia-Moreno and Sunita Kishor contributed and/or analysed data. Charlotte Watts obtained funding. Naeemah Abrahams and Charlotte Watts input into the design of the study. All authors input into the writing of the manuscript and approve of its contents.

Declaration of interests:

All authors declare that they have no conflict of interest. *Betzabe Butron and Alessandra Guedes are staff members of the Pan American Health Organization. The authors alone are responsible for the views expressed in this publication, and they do not necessarily represent the decisions or policies of the Pan American Health Organization.* Howard Kress and Natasha Hollis are staff members of the Centers for Disease Control and Prevention. The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention or other affiliated institutions. Claudia Garcia-Moreno is a staff member of the World Health Organization. *The author alone is responsible for the views expressed in this publication, and they do not necessarily represent the decisions or policies of the World Health Organization.*

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Abstract:

Objective: The epidemiology of violence against children is likely to differ substantially by sex and age of the victims and by perpetrators. Thus far, investment in effective prevention strategies has been hindered by lack of clarity in the burden of childhood violence across these dimensions. We produced the first age and sex specific prevalence estimates by perpetrator type for physical, sexual and emotional violence against children globally.

Design: We used random effects meta-regression to estimate prevalence.. Estimates were adjusted for relevant quality covariates, variation in definitions of violence and weighted by region, age and sex specific population data to ensure estimates reflect country population structures.

Data Sources: Secondary data from 600 population or school-based representative datasets and 43 publications obtained via systematic literature review, representing 13,830 estimates from 171 countries.

Eligibility criteria for selecting studies: Estimates for recent violence against children aged zero to 19 were included.

Results: The most common perpetrators of physical and emotional violence for both boys and girls across a range of ages are household members, with prevalence often surpassing 50%, followed by student peers. Children reported experiencing more emotional than physical violence from both household members and students. For children attending school, emotional violence from other students is more common than emotional violence from household members. The most common perpetrators of sexual violence against girls aged 15 to 19 years are intimate partners, however few data on other perpetrators of sexual violence against children are systematically collected internationally. Few age- and sex-specific data are available on violence perpetration by schoolteachers, however existing data indicate high prevalence of physical violence from teachers towards students. Data from other authority figures, strangers, siblings and other adults are limited, as are data on neglect of children.

Conclusions: Without further investment in data generation on violence exposure from multiple perpetrators for boys and girls of all ages, progress towards Sustainable Development Goals 4, 5 and 16 may be slow. Despite data gaps, evidence shows violence from household members, peers in school and for girls, from intimate partners, should be prioritised for prevention.

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What is already known on this subject

Previous large-scale studies synthesizing global violence data have estimated the proportion of the population who experience violence at any time during 'childhood', adolescence or over the past year. However, the basic epidemiology and patterning of different forms of violence by different perpetrators, are likely to differ vastly by both sex and specific age. Age-, sex- and perpetrator-specific prevalence estimates of violence against children are not comprehensively available.

What this study adds

Estimates based on available data suggest that the most common perpetrators of physical and emotional violence for both boys and girls across a range of ages are household members, followed by peers in school. The most common known perpetrators of sexual violence against girls aged 15 to 19 years are intimate partners. However, few data on sexual violence exist on other age groups or for boys.

INTRODUCTION

Globally, levels of violence against children are worryingly high. More than 50% of children report experiencing some form of physical, sexual, emotional violence or neglect in the past year[1], and global meta-analyses suggest that about 10% of boys and 20% of girls have experienced sexual violence in their lifetime[2, 3]. Violence during childhood has a negative impact on brain development[4, 5], and well-documented adverse health and social consequences, including increased risk of later mental health disorders, sexually transmitted infection, substance use, obesity, poor academic outcomes and psychosocial well-being[6-10]. Since the landmark world report on violence against children[11], this issue has increasingly become the focus of global aid and policy agendas. Commitments to reduce violence in childhood now feature in Sustainable Development Goals (SDGs) 4, 5 and 16.

Previous large-scale studies synthesizing global violence data have estimated the proportion of the population who experience violence at any time during childhood [2, 3], during adolescence[12] and more recently, over the past year[1]. However, the epidemiology of violence is likely to differ by age and sex. The aims of this paper are to synthesise information on: 1) the gaps in data on physical, sexual and emotional violence and neglect by age, sex, and geographical region; and 2) the prevalence of past-year physical, sexual and emotional violence and neglect against male and female children and adolescents, at each age from 0-19 years, by perpetrator.

Given the variations in the definitions and meanings of violence across contexts, we purposively take a broad view, including acts which may be framed as aggression, abuse and discipline to varying degrees in different contexts (Box 1). We build on previous synthesis efforts[1, 13] by examining data coverage and prevalence by sex at each individual year of age from 0 to 19 years, rather than across broad age categories. Other forms of violence, including exploitation and human trafficking, are outside the scope of our review.

Box 1. Defining violence

What is considered violence, abuse, punishment, aggression, and discipline can differ considerably across countries, by the nature of the relationship between people who are using or experiencing different acts of physical, sexual and emotional behaviours, and across time. In this paper, we include acts which are measured in the context of survey modules asking parents about disciplining their children, asking students about fighting with their peers, and asking adolescents about their experiences in intimate partnerships, amongst other measures. Within each of these relationships, there will be a heterogeneity of different power arrangements. Some argue that abuse of power is central to defining different physical, sexual and emotional acts as ‘violence’, and others may argue that inherent in each of these dyads are unequal power relationships which mean that a range of acts can be classified as ‘violence’. Similarly, what might be framed as a ‘discipline practice’ (and therefore, as more acceptable) in one context at one time (for example, hitting children on the buttocks with stick), might be framed as ‘violence’ (and therefore less acceptable) in that same context at a different time. We acknowledge that differing levels of acceptability of violence may influence reporting of prevalence. However, there is clear evidence that exposure to different acts of physical, sexual and emotional violence has adverse health and developmental outcomes. In this paper, we take a broad view, and include a wide range of acts which could have adverse consequences ranging from severe to none. It is important to recognise however that many of these acts will not be seen as ‘violence’ or ‘abuse’ (that is, they will be seen as acceptable) by different groups in different countries.

METHODS

We performed secondary analysis of existing international datasets and a systematic review of published and grey literature. Our protocol is registered in PROSPERO 2015:CRD42015024315.

Data from large datasets. All relevant international datasets (where the same survey methodology was used in more than one country) known to the authorship team were eligible for inclusion. We analysed data from the Demographic and Health Surveys (DHS, 44 countries); the Multiple Indicator Cluster Surveys (MICS, 35 countries); the WHO Multi-Country Study on Women's Health and Domestic Violence Against Women (WHO MCS, 11 countries); the Reproductive Health Surveys (RHS, 6 countries); the Global Student Health Surveys (GSHS, 78 countries); the Health Behaviour in School-Aged Children (HBSC, 39 countries); the Violence Against Children Surveys (VACS, 4 countries); EU Kids Online (25 countries); Progress in International Reading Literacy Study (PIRLS, 46 countries); Trends in International Mathematics and Science Study (TIMSS, 69 countries); and combined TIMSS/PIRLS surveys (33 countries). We also included data from the UBS Optimus study in China and the Good Schools Study in Uganda. Estimates for age- and sex-specific prevalence of different forms of violence, and perpetrators of violence (where applicable) were produced, accounting for the complex sampling scheme employed in each survey. These estimates were combined with data extracted from studies identified via the systematic review. We could not obtain data from the Balkan Epidemiological Study on Child Abuse and Neglect (BECAN).

Systematic review. Database search strategy. We searched the following databases from first record to 7 December 2015: MEDLINE, EMBASE, PsycINFO, and Global Health. Controlled vocabularies of each database were used to tailor search terms; for example, MeSH terms for MEDLINE. Search terms included words related to violence and maltreatment, children, and study filters to identify observational studies and trials which might have survey data (further described in Annex 1). There were no restrictions on language or year of publication and therefore data is represented up to December 2015.

Inclusion criteria. Studies reporting on the prevalence of physical, sexual and emotional violence, and neglect, as well as perpetrators of various forms of violence against children aged 0-19 years, were considered for inclusion. We also included studies reporting on witnessing domestic or intimate partner violence. All author definitions of these forms of violence, and of perpetrator, were accepted. Only studies using a survey methodology to gather data from participants sampled to represent a geographic area, or school-based populations of young people, were considered. Self-reports on experience of violence were included, and studies using proxy reports for younger children were included (for example, the MICS, which gathers parent's and household members reports of their use of psychological and physical aggression against children aged 2-14 years). Only studies in which reports of violence were over a narrow age range (5 years or less) were included in meta-regressions; most estimates were specific to children at each single year of age. Similarly, most studies had a recall period of one year, but those with recall periods below one year were also included in meta-regressions. In the partner violence meta-regression one estimate had a recall period of 18 months, which was included and adjusted for in analysis.

Screening and Data extraction. Screening of abstracts and full text articles was performed by KM, LM, and AW. KM performed initial screening to remove irrelevant titles. Due to the volume of results, double screening of abstracts was not employed. Instead, KM, LM and AW screened a subset of 150 articles together using standardised inclusion criteria, discussing application of the criteria until consistency was reached. Remaining abstract screening was done by one reviewer. Data on study characteristics and quality were extracted by KM or LM, into a customised Google form database created by LM. KM and LM discussed any questions on a weekly basis. Definitions of violence varied considerably across studies, and each definition was recorded in detail.

Quality appraisal. We describe the quality of estimates and considered the following characteristics to be higher quality: whether studies were nationally representative versus representative of a smaller geographic area, since prevalence may differ within geographical areas within a country); whether study questions ask about specific behavioural acts of violence (versus generic ‘violence’ exposure , because the former avoids participants’ subjective decisions about what constitutes ‘violence’); whether multiple items were used to assess exposure to violence (versus single items because asking about multiple specific acts will yield more accurate prevalence estimates); whether an anonymous disclosure method was used, versus a face to face interview, was described, because anonymous methods tend to produce more disclosures[14]; and whether children were able to self-report (versus a proxy report was relied upon). Children’s own reports may be increasingly accurate as they age, especially for more hidden or stigmatising forms of violence. However, very young children may not remember all of the violence they have experienced; in which case proxy reports may be more reliable. We described whether interviewers were trained on violence (versus not, as more interviewer training results in higher levels of disclosure in studies on violence against women); and whether the study was specifically about violence or maltreatment exposure (versus another topic, as studies which intend to measure violence are likely to differ from general studies on a number of quality criteria). Participation rates and levels of missing data are also described.

Data synthesis. Data from the systematic review and dataset analyses were combined. We describe overall coverage of data by geographic region, sex, age, perpetrator category, and form of violence (Tables 1 and 2). Where studies have not reported prevalence as a percentage or proportion with a standard error or 95% confidence interval, we calculated these based on data provided in reports or via contact with authors where possible. Estimates from groups of fewer than 10 participants were excluded.

Where the number of sex-specific prevalence estimates per perpetrator for a given form of violence was greater than 50, we performed random effects meta-regressions[15] (using the metan command in Stata 14) to estimate the prevalence of exposure to violence for each sex and year of age. Unadjusted estimates are presented in Annex 2. Covariates for each regression model are described in Annex 4. Estimates were adjusted for relevant quality covariates and also by definitions of violence such that overall estimates would reflect higher quality studies with the ‘best’ definition, for example measures that include more specific acts of violence. Details of data sources and definitions of violence for each meta-regression model are specified in Annex 3. Estimates were then weighted by WHO region age- and sex-specific population data to ensure overall estimates would be reflective of country population structures. The mean estimate and 95% confidence interval (CI) for each age are plotted separately in bar graphs (Figures 2-4). In cases where a given age had fewer than 10 estimates, unadjusted estimates from meta-analysis[16] are presented in the same bar graphs (noted in footnotes) as estimates from meta-regressions. These are unadjusted for country-population age structures and should not be interpreted as globally representative. Prevalence figures and confidence intervals for each age specific estimate presented from meta-regression in figures are in Annex 5.

Where the number of prevalence estimates per perpetrator (over all age and sex categories) for a given form of violence was fewer than 25, we display estimates on a forest plot separately by age, and did not attempt to quantitatively synthesise them.

Most studies reported violence exposure over a one-year age range. Where studies reported violence over a larger age range, we took the midpoint of the age range and assumed the prevalence pertained to that age (for example, for a sample 15-17 year olds reporting only an average prevalence, we modelled as the prevalence at age 16 years). For studies where the recall period was below one year, we counted that prevalence as past-year prevalence.

Our goal is to understand who the most common perpetrators of violence by age and sex in the whole population are, and therefore to compare prevalence across groups with different denominators. This required us to adjust estimates on school violence from school-based surveys, and intimate partner violence from ever-partnered young people, as not all young people attend school or are in intimate relationships (and therefore by definition are not exposed to these forms of violence). Estimates provided with students as the denominator were adjusted by the WHO regional estimation proportion of students attending primary and secondary schools[17]. Estimates provided with the ever-partnered proportion of the survey population as the denominator were adjusted by the proportion of country populations which had ever had sex by age 20 years (using DHS data[18]), to make them reflect the prevalence of different forms of partner violence in the entire population (rather than only the ever-partnered population).

Patient involvement

Some of the original studies or surveys used in this review do routinely share results with children participants, namely HBSC surveys. We thank all participants involved in the original studies and surveys in the acknowledgements section of this paper. No children or adolescents were involved in setting the research question, design or the outcome measures, nor were they involved in interpretation or writing up of results of this paper. This paper was produced as part of the kNow Violence in Childhood initiative, which disseminates results from the larger initiative to children and adolescents.

RESULTS

Data coverage

In total, we retrieved 643 studies from 171 countries, containing 13,830 separate age- and sex-specific prevalence estimates (Figure 1).

<<Figure 1>>

Overall availability of estimates is described in Table 1. Europe had substantially more data which met our inclusion criteria compared to other regions, and the South-East Asia Region had very few estimates compared to other regions. Physical violence was most commonly reported in an age- and sex-specific way, followed by emotional violence. Far fewer estimates were available for sexual violence, and no estimates for neglect or witnessing intimate partner violence were age- and sex-specific.

Table 1. Data coverage of prevalence estimates of violence against children

| | Number of estimates | Number of Countries | Number of Studies |
|--|---------------------|---------------------|-------------------|
| Total | 13830 | 171 | 643 |
| Sex | | | |
| Male | 6334 | 154 | 609 |
| Female | 7496 | 151 | 643 |
| Form of violence | | | |
| Emotional | 4613 | 14 | 418 |
| Physical | 6024 | 170 | 591 |
| Sexual | 567 | 57 | 72 |
| Neglect | 0 | 0 | 0 |
| Witnessing IPV | 0 | 0 | 0 |
| Physical/emotional | 2267 | 123 | 243 |
| Physical/emotional/neglect | 38 | 1 | 1 |
| Physical/emotional/sexual | 271 | 45 | 45 |
| Physical/sexual | 48 | 13 | 14 |
| Physical/emotional/sexual/witnessing | 2 | 1 | 1 |
| Region (WHO) | | | |
| African region | 2,487 | 34 | 75 |
| Americas region | 2,379 | 36 | 93 |
| Eastern Mediterranean region | 2,333 | 20 | 91 |
| European region | 4,878 | 52 | 289 |
| South-east Asia region | 417 | 8 | 23 |
| Western Pacific region | 1,336 | 20 | 72 |
| Main perpetrator groupings | | | |
| Parent/Caregiver/ Household member | 2354 | 48 | 49 |
| Student | 9149 | 136 | 484 |
| Peer (any peers either from school, home, other) | 455 | 27 | 312 |
| Boyfriend/Girlfriend/Intimate partner | 1355 | 54 | 69 |
| Teacher | 48 | 1 | 1 |
| Stranger | 0 | 0 | 0 |
| Adult | 2 | 1 | 1 |
| Authority figures | 42 | 3 | 3 |
| Any perpetrator | 237 | 17 | 24 |
| Other | 188 | 5 | 5 |
| Included in meta regression | | | |
| Physical violence from students, boys | 2157 | 134 | 471 |
| Physical violence from students, girls | 2092 | 134 | 471 |
| Physical violence from household members (proxy reports), boys | 559 | 43 | 43 |
| Physical violence from household members (proxy reports), girls | 559 | 43 | 43 |
| Physical violence from intimate partners, girls | 341 | 47 | 58 |
| Emotional violence from students, boys | 1287 | 82 | 309 |
| Emotional violence from students, girls | 1239 | 82 | 309 |
| Emotional violence from household members (proxy reports), boys | 546 | 43 | 44 |
| Emotional violence from household members (proxy reports), girls | 546 | 43 | 44 |
| Emotional violence from intimate partners, girls | 311 | 45 | 50 |
| Sexual violence from intimate partners, girls | 323 | 45 | 53 |

| | | | |
|--|----|---|---|
| Included in meta-analysis | | | |
| Physical violence from authority figures, boys | 30 | 5 | 5 |
| Physical violence from authority figures, girls | 30 | 5 | 5 |
| Physical violence from caregivers (child self-reports), boys | 30 | 5 | 5 |
| Physical violence from caregivers (child self-reports), girls | 30 | 5 | 5 |
| Emotional violence from caregivers (child self-reports), boys | 15 | 2 | 2 |
| Emotional violence from caregivers (child self-reports), girls | 15 | 2 | 2 |
| Not presented in this paper | | | |
| Sexual violence from any perpetrator, girls | 66 | 8 | 8 |
| Sexual violence from any perpetrator, boys | 52 | 8 | 8 |

Breaking down the number of available estimates by sex and perpetrator (Table 1), the most commonly measured forms of violence were physical and emotional violence from students towards other male and female students, followed by physical and emotional violence from caregivers towards boys and girls, followed by intimate partner violence against girls, and then physical violence against boys and girls from 'authority figures'. There were too few estimates on forms of violence perpetrated by strangers, teachers, other adults, or from overall categories of 'any perpetrator' (that is, from all perpetrators combined), to compute overall prevalence figures, so these are not presented in this paper.

Table 2: Number of prevalence estimates for all forms of violence by age and data source

| age | estimates | Countries | Studies | Sys Rev | DHS | WHO | RHS | MICS | HBSC | GSHS | PIRLS | TIMSS | EU kids | VACS | Optimus | GSS |
|--------------|-----------|-----------|---------|---------|-------|-----|-----|-------|-------|-------|-------|-------|---------|------|---------|-----|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 178 | 44 | 44 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| 3 | 178 | 44 | 44 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| 4 | 178 | 44 | 44 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| 5 | 178 | 44 | 44 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| 6 | 184 | 46 | 46 | 4 | 30 | 0 | 0 | 140 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 |
| 7 | 200 | 49 | 52 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 12 | 10 | 0 | 0 | 8 | 0 |
| 8 | 392 | 69 | 99 | 8 | 30 | 0 | 0 | 140 | 0 | 0 | 118 | 88 | 0 | 0 | 8 | 0 |
| 9 | 1,102 | 105 | 261 | 0 | 30 | 0 | 0 | 140 | 0 | 0 | 517 | 330 | 50 | 0 | 8 | 27 |
| 10 | 1,205 | 108 | 277 | 6 | 30 | 0 | 0 | 140 | 0 | 0 | 557 | 360 | 50 | 0 | 8 | 54 |
| 11 | 1,429 | 110 | 309 | 2 | 30 | 0 | 0 | 140 | 336 | 0 | 493 | 316 | 50 | 0 | 8 | 54 |
| 12 | 1,350 | 142 | 337 | 4 | 30 | 0 | 0 | 140 | 0 | 366 | 295 | 403 | 50 | 0 | 8 | 54 |
| 13 | 1,865 | 151 | 403 | 10 | 30 | 0 | 0 | 140 | 336 | 416 | 135 | 657 | 50 | 29 | 8 | 54 |
| 14 | 1,410 | 147 | 330 | 15 | 30 | 0 | 0 | 140 | 0 | 420 | 38 | 625 | 50 | 30 | 8 | 54 |
| 15 | 1,633 | 152 | 262 | 33 | 102 | 8 | 20 | 0 | 336 | 420 | 16 | 547 | 50 | 31 | 16 | 54 |
| 16 | 870 | 111 | 230 | 30 | 286 | 20 | 24 | 0 | 0 | 38 | 8 | 413 | 50 | 31 | 16 | 54 |
| 17 | 645 | 86 | 166 | 15 | 221 | 32 | 24 | 0 | 0 | 30 | 2 | 247 | 0 | 31 | 16 | 27 |
| 18 | 466 | 71 | 124 | 15 | 244 | 40 | 24 | 0 | 0 | 0 | 0 | 112 | 0 | 31 | 0 | 0 |
| 19 | 367 | 56 | 93 | 2 | 256 | 44 | 24 | 0 | 0 | 0 | 0 | 10 | 0 | 31 | 0 | 0 |
| Total | 13,830 | - | - | 144 | 1,399 | 144 | 116 | 1,820 | 1,008 | 1,690 | 2,191 | 4,120 | 400 | 214 | 152 | 432 |

Note: PIRLS/TIMSS combined surveys are included under PIRLS (school grade 4).

Table 2 shows the overall breakdown of available data sources by age. Far more data were available for the adolescent period, from about age 11 upwards, versus age 10 and below. Table 2 also shows

data sources by age—strikingly, almost all data for the under 8-year-old age group came from the MICS, which measures caregivers reports of physical and psychological aggression against their children. For 8 to 11 year olds, data comes almost exclusively from MICS, and PIRLS and TIMSS, which are school-based surveys measuring violence from students to other students. Almost no surveys which met our inclusion criteria measured violence from other perpetrators, or sexual violence, against children below 11 years. Most surveys which measure sexual violence concentrated on the adolescent period. Annex 6 shows the data sources by geographic region, and Annex 7 shows the number of available estimates by perpetrator and form of violence.

Prevalence of recent physical and emotional violence perpetrated by household members

Household members appear to be the most common perpetrators of physical and emotional violence against children, based on available data. However, caregiver and child reports differ radically in terms of prevalence, and hence are summarised separately. Very few caregiver-reported data are available for children above age 14 years and no data for those below 2 years old. All caregiver-reported data comes from MICS and DHS, and is over a past-month recall period. Based on caregiver’s reports, for children aged 2 to 14 years, levels of past month emotional violence are higher than for physical violence (Figure 2). Levels of past-month emotional violence remain relatively constant over age group, with about 60% to 70% of boys and girls experiencing emotional violence from a caregiver or other household member at age 2-14. Levels of past-month physical violence are highest in younger age groups, with between 50 and 60% of girls and boys experiencing physical violence at age 2. Levels of past-month physical violence appear to decline slowly as age increases, and at age 14, about 40 to 50% of boys and girls experience physical violence from a caregiver or household member. Levels of emotional violence however remain relatively constant over age, for both boys and girls.

<<Figure 2>>

There are relatively few studies which collect children’s reports of physical and emotional violence perpetrated by caregivers (Annex 8) and also report age- and sex- specific prevalence. These few provide data on caregiver perpetrated violence for children aged 9 to 19 years. In general, the prevalence is far lower when compared to caregiver reports at each age. There is some suggestion from children’s reports that the prevalence of past-year physical violence from caregivers may decline over age, similar to caregiver reports. Children’s reports of emotional violence from caregivers are also rare, with only two studies reporting age- and sex-specific data on this for children aged 9 to 19 years. Estimates are far lower compared to caregiver reports, with fewer than 10% of 12 year olds reporting past-year emotional violence from caregivers, but nearly 40% of 19 year olds. There is some suggestion that prevalence of past-year violence increases over age group (in contrast to parent reports, which remain more constant over age group). There were no data available on sexual abuse from parents/caregivers which met the inclusion criteria.

Prevalence of recent physical and emotional violence perpetrated by students

Students are the second most common perpetrator of physical and emotional violence against children at the population level, based on available data. Globally, between 70 and 80% of all boys and girls aged 8 to about 11 years, have experienced past-year emotional violence from a school student (Figure 3). For those ages 12-17, prevalence is about 50%, reflecting the fact that fewer children attend secondary school globally versus primary school. Restricting to school-going children only, the prevalence of emotional violence is relatively constant across age groups (Annex 9). Age- and sex-specific data prior to age 6 are not available (although fewer children under age 6 will be in school). Levels of past-year physical violence experienced by students are also high—from each age after age 8 to about age 11, about 40% of girls and 50% of boys experienced past-year physical violence from a student. In boys, from age 12, prevalence declines slightly over increasing age; for

girls from age 12, prevalence remains more constant. In girls, overall levels are lower in most age groups versus boys, which partly reflects that fewer girls attend school globally versus boys.

<<Figure 3>>

Prevalence of recent physical, emotional and sexual violence perpetrated by intimate or dating partners

Based on available data, intimate partners are the third most common perpetrator of violence against girls in childhood. However, very few estimates for boys of any age, or girls below the age of 15, are available (Figure 4). Data is available for girls aged 15-19, largely owing to inclusion of this age group in the DHS. Past-year physical and emotional violence by intimate or dating partners are reported by about 7% of all girls aged 15, to about 13% of all girls aged 19 years. Past-year sexual violence from intimate and dating partners is reported by about 2% of all girls aged 15, but increases over age such that about 5% to 7% of girls aged 18 and 19 years report past-year sexual victimisation. Prevalence as a proportion of ever-partnered girls is in Annex 9.

<<Figure 4>>

Prevalence of recent physical violence by teachers, other authority figures and other adults

Very few studies provided age- and sex-specific period prevalence estimates for physical violence perpetrated by teachers, police and other adults. Prevalence from these studies are displayed individually for each age in Figure 5 (girls) and Figure 6 (boys). Data are available for children aged 9 to 18. Estimates of violence from teachers come mainly from one study conducted in Uganda, and estimates for authority figures come from the VAC Surveys in Kenya, Haiti, and Tanzania. Prevalence of physical violence from teachers is extremely high at each age, with more than 75% of 9 to 16 year olds reporting past-year physical violence from a teacher in Uganda. Violence from authority figures was also common but varied by country, with 6 to 23% of Haitian children reporting this across age groups, but with 15% to nearly 60% of Tanzanian children reporting this across age groups. Only one study had data on emotional and sexual violence from teachers[19], so this data is not summarised here.

<<Figure 5>>

<<Figure 6>>

DISCUSSION

We have shown that there are large gaps in existing global data on the prevalence and perpetrators of different forms of violence against children of different ages. There is a severe lack of self-report data on any form of violence against children under about 11 years of age; on sexual violence across a range of ages, and on neglect. Age- and sex-specific data on witnessing intimate partner violence is also rare. We also know much more about violence perpetrated by students and family members, versus other types of perpetrators—there is little data available on teachers, other authority figures, strangers, siblings, peers outside school settings and other adults. In terms of global availability, more data is available from Europe than from other regions, with South-East Asia being particularly under-represented. For both boys and girls, we have little idea of who the main perpetrators of sexual violence are, with the exception of intimate partners for girls aged 15 to 19 years. Despite

data gaps, where we are able to synthesise data, they show that children are most likely to experience physical and emotional violence from family members, followed by fellow students, and then intimate partners during adolescence. However, what little data exists on violence from teachers and other authority figures points to very high prevalence in some settings. Data also show variation by age, with emotional violence from both other students and caregivers remaining relatively constant over age, but physical violence from other students and caregivers declining over adolescence. Past-year prevalence of sexual violence from intimate partners appears to rise steadily with age across the adolescent period for girls. For boys, there is little age-specific data available.

As seen with estimates of violence from caregivers/families, prevalence varies widely depending on whether caregivers are reporting or children are reporting. Perhaps contrary to expectation, caregiver reports, mainly from the MICS, yield higher prevalence estimates versus children’s own reports (which tend to be from other surveys). The MICS data on emotional violence, as analysed here, include items measuring shouting, screaming and calling a child stupid or lazy (Annex 3), which may occur frequently but may not be viewed as particularly traumatic, which likely will increase disclosure by caregivers. Caregivers may be more likely to report these less severe acts of violence, relative to more severe forms. Children may also be more likely to recall incidents which were severe or traumatic for them, thus biasing self-reported estimates downwards. Additionally, younger children may have more trouble recalling events over a one year period versus older children, or parents. Further research is needed to understand the reasons for this difference and to understand which types of reports may be useful indicators for different purposes.

Strengths and Limitations

This global review has attempted to provide a more nuanced epidemiological breakdown of the prevalence of different forms of violence by age, sex and perpetrator. Whilst published data are available from specific studies presenting data across countries [13, 20-22], no global synthesis disaggregated by age is currently available. Our main limitation relates to data presentation of the underlying studies which we have included in the review—if published studies did not present data in an age- and sex-specific fashion, we were unable to include them. However, what we have synthesized represents the evidence from published data and large international datasets, and therefore the knowledge base available to those developing age-appropriate violence prevention programs and allocating funding. We were also unable to access one dataset which would have met the inclusion criteria (BECAN), and there may be others which our systematic search efforts did not pick up. We produced global average prevalence estimates—where there were enough data, we modelled these using meta-regression techniques and adjusted for differences in definitions of forms of violence and study quality characteristics. Although every effort was made to adjust for differences in measurement of violence across studies there may be residual confounding related to both definitions of violence (including whether studies asked about experience of specific acts of violence and how many questions they asked) and other study quality variables. These differences may in part explain age, sex and regional differences in prevalence estimates. Further, the school-based studies tended to include fewer questions about experience of different specific acts of violence, thus the school-based estimates may be more prone to misclassification of violence exposure relative to estimates of household and intimate partner violence. For most countries, data were only available from one or two survey years—pooling data from different years may obscure trends in the prevalence of violence over time. As with all studies on violence, there is likely to be under-reporting of certain forms of violence, particularly sexual violence, due to the stigma associated with victimisation and potential fear of reprisals. Our estimates are also based on population-based household and school-based surveys, which will include far fewer children who live outside of family care, on the street, or in institutions, and may under-represent experiences of

those in conflict settings. In some cases, similar to other global estimates, data from only a limited number of countries is currently available.

Once more countries conduct prevalence studies, these estimates will change. It is clear from looking within single studies that have measured violence from multiple perpetrators that perpetration patterns may differ by setting. In one study of children attending school in Uganda, physical violence from school staff was the most common form of violence experienced, followed by violence from caregivers and peers. Estimation efforts should be repeated as more comprehensive data becomes available in different settings.

Implications for future research, policy and programming

There is a clear need for more data on the experiences of younger children, particularly around family and sexual violence. This may stem partly from investigators' concerns about the validity of younger children's survey responses. For very young children it is likely that we must always rely on proxy reports; however for children of later primary school age, it may be possible to develop and test survey measures that allow them to directly report on their own experiences. Some school-based surveys do include questions on peer violence for fourth graders (about 9 years old). Efforts need to be made to develop methods to ask about other forms of violence in a reliable and valid way. Further data is also needed on perpetrators besides students and peers, intimate partners, and household members. This is particularly true for sexual violence, where we have little understanding of who perpetrators may be. Questions on violence from teachers and authority figures are included in some surveys, but this is generally not collected on a widespread basis—yet prevalence data show alarming figures in Uganda, Tanzania, and Kenya; for example, with up to 93% of students in Uganda reporting violence from school staff..

Comparability of existing surveys is limited, with a range of different questions being used to capture overlapping exposures to different forms of violence. Some of the larger surveys with good international coverage ask only two or three questions; conversely, more specialised violence surveys have been conducted in a much smaller number of countries. While each survey provides valuable information, standardisation of measures would be useful to support monitoring in countries, including related to the SDGs. Without further standardisation, countries will not be able to effectively track progress related to violence reduction. Similarly, our data synthesis clearly shows that experiences of violence in childhood are nearly universal. While all violence can be conceptualised as a violation of rights, a more nuanced understanding of what constitutes risky exposures from a public health perspective would be valuable for directing scarce prevention resources.

Programmatically, the home setting is of obvious importance. Both the US Centers for Disease Control and the WHO, along with 8 other key global partner organizations, have recently issued INSPIRE[23], guidance on effective programming to reduce violence against children, including in the home setting. There is a relatively robust evidence base around parenting and family strengthening programs, however the vast majority of evaluations have taken place in high income countries. Work is currently underway to test efficacy of a number of parenting programs in lower income countries (eg.[24]).

School environments must be targetted—if a child is attending school, they are likely to experience more violence in this environment than in the home. In many settings, first intimate partnerships will begin while one or the other partner is attending school, which also can provide an intervention opportunity to reduce sexual violence. INSPIRE contains recommendations for school programs, although it is notable that most of these programs focus on and have been tested for efficacy in relation to peer violence and bullying, rather than violence from staff to students or violence in intimate relationships. Only a handful of programs have been tested to reduce violence from school

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staff towards students[25-27], and recent reviews of dating violence prevention interventions suggest that many of these programs have limited evidence of efficacy[28, 29]. The inclusion of violence in childhood in the SDGs is welcome in the violence prevention and child health communities. Our results suggest that new, standardised data collection from a broader range of ages, which includes both sexes, is needed, along with a discussion about the ethical aspects of gathering such data from children and adolescents. At present, it will be difficult to monitor whether violence reductions happen equitably across all age groups of children, and across different areas of the world, as there are relatively few data sources that can present this information in a disaggregated way.

Conclusions

Violence against children is widespread, and must be addressed to improve children’s health and well-being. There are large gaps in current understandings of the epidemiology of violence against children. Improved data collection is needed to better inform policy and programming, and to meet SDG targets. Programmes to prevent violence within households are needed at scale, and increased focus on schools as a prevention site is urgently needed.

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Figures

Figure 1. Flow chart describing data inclusion

Figure 2: Prevalence of recent physical and emotional violence perpetrated by household members

Legend: Data sources: Multiple Indicator Cluster Surveys (MICS), Demographic and Health Surveys (DHS). Model shows caregivers reports of physical aggression by household members. Definitions are provided in Annex 3 and exact prevalence numbers are in Annex 5. To read bar graph: age of the child is on the y-axis; prevalence of each form of violence is on the x axis. Prevalence corresponds to the distance of the bar along the x-axis for boys (to the left), and girls (to the right). Forms of violence are overlaid; and the black bars are a 95% confidence interval. For example, for girls aged 2 years, the prevalence of physical violence is 56% (95%CI 49-63%), and the prevalence of emotional violence is 60% (95%CI 52-68%).

Figure 3: Prevalence of physical and emotional violence perpetrated by students against boys and girls in the past 12 months

Legend: Data sources: GSHS, HBSC, PIRLS, TIMSS and systematic review publications. Model shows children’s self-reported exposure. Definitions are provided in Annex 3 and exact prevalence number are in Annex 5. Pooled prevalence estimates at ages 6, 7 and 19 years are from unadjusted meta-analyses, all others are adjusted meta-regression estimates. To read bar graph: age of the child is on the y-axis; prevalence of each form of violence is on the x axis. Prevalence corresponds to the distance of the bar along the x-axis for boys (to the left), and girls (to the right). Forms of violence are overlaid; and the black bars are a 95% confidence interval. For example, for boys aged 8 years, the prevalence of physical violence is 54% (95%CI: 43-65) and the prevalence of emotional violence is 74% (95%CI 63-84%). Note that these estimates are for the entire population, not just school-attending boys and girls.

Figure 4: Prevalence of physical, emotional and sexual violence perpetrated by intimate or dating partners against boys and girls in the past 12 months

Legend: Data sources: Demographic and Health Surveys (DHS), World Health Organization Multi-Country Study on Women's Health and Domestic Violence against Women (WHO VAW), Reproductive Health Surveys (RHS), Good Schools Study (GSS) and Violence against Children Surveys (VACS, for physical violence only) and systematic review publications. Model shows children's self-reported exposure. Definitions are in Annex 3 and exact prevalence number are in Annex 5. Pooled prevalence estimates at ages 10, 11, 13 and 14 years are from unadjusted meta-analyses all others are adjusted meta-regression estimates. To read bar graph: age of the child is on the y-axis; prevalence of each form of violence is on the x axis. Prevalence corresponds to the distance of the bar along the x-axis for boys (to the left), and girls (to the right). Forms of violence are overlaid; and the black bars are a 95% confidence interval. For example, for girls aged 19 years, the prevalence of sexual violence is 5.2% (95%CI 3.3-7.0%); the prevalence of physical violence is 12.6% (95%CI 10.1-15.0%); and the prevalence of emotional violence is 13.24% (95%CI 10.01-16.47%). Note that these estimates are for the entire population, not just ever-partnered boys and girls.

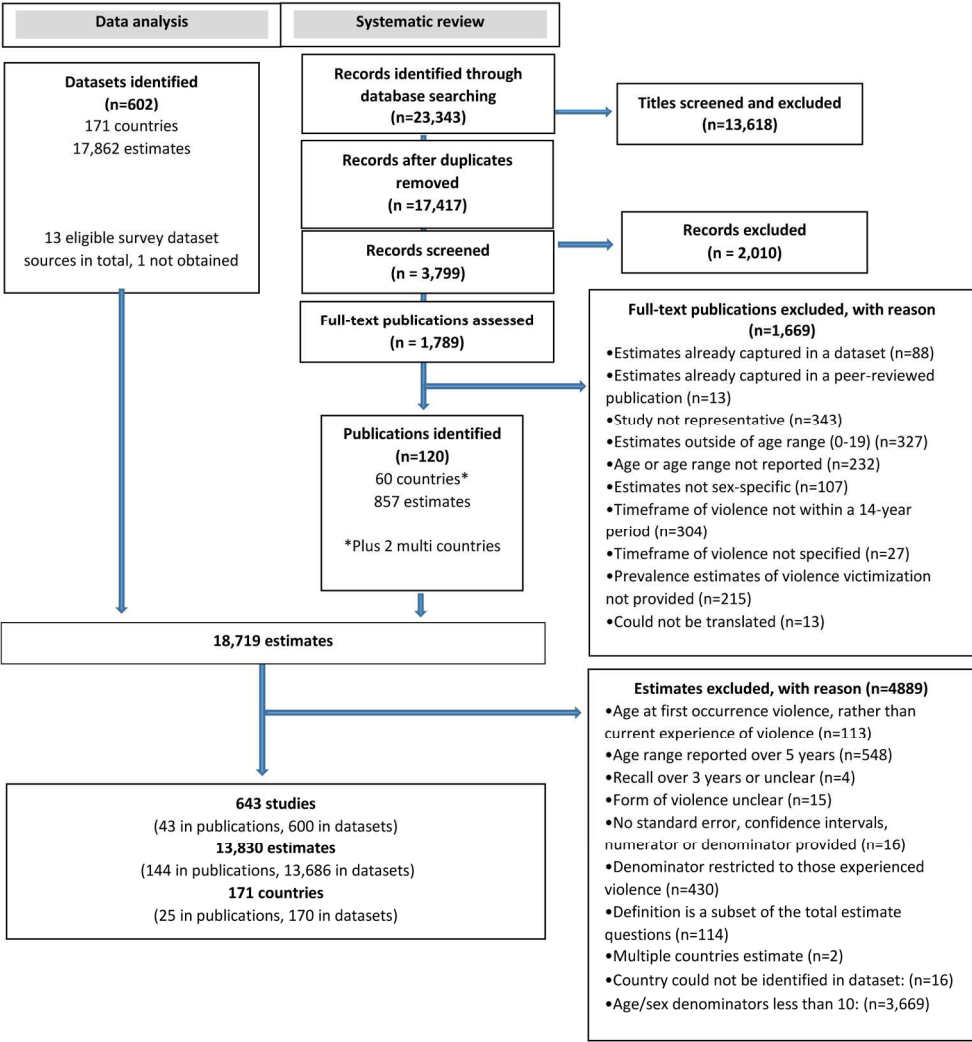
Figure 5. Prevalence of physical violence perpetrated by teachers, other authority figures and other adults against girls in the past 12 months

Legend: Estimates are children's self-reported exposure. Definitions are in Annex 3. To read the forest plot: for each year of age, perpetrator, data source and country are described along the y-axis. Along the x-axis, prevalence estimates from each are represented by a dot, with a bar drawn through to represent the 95% confidence interval.

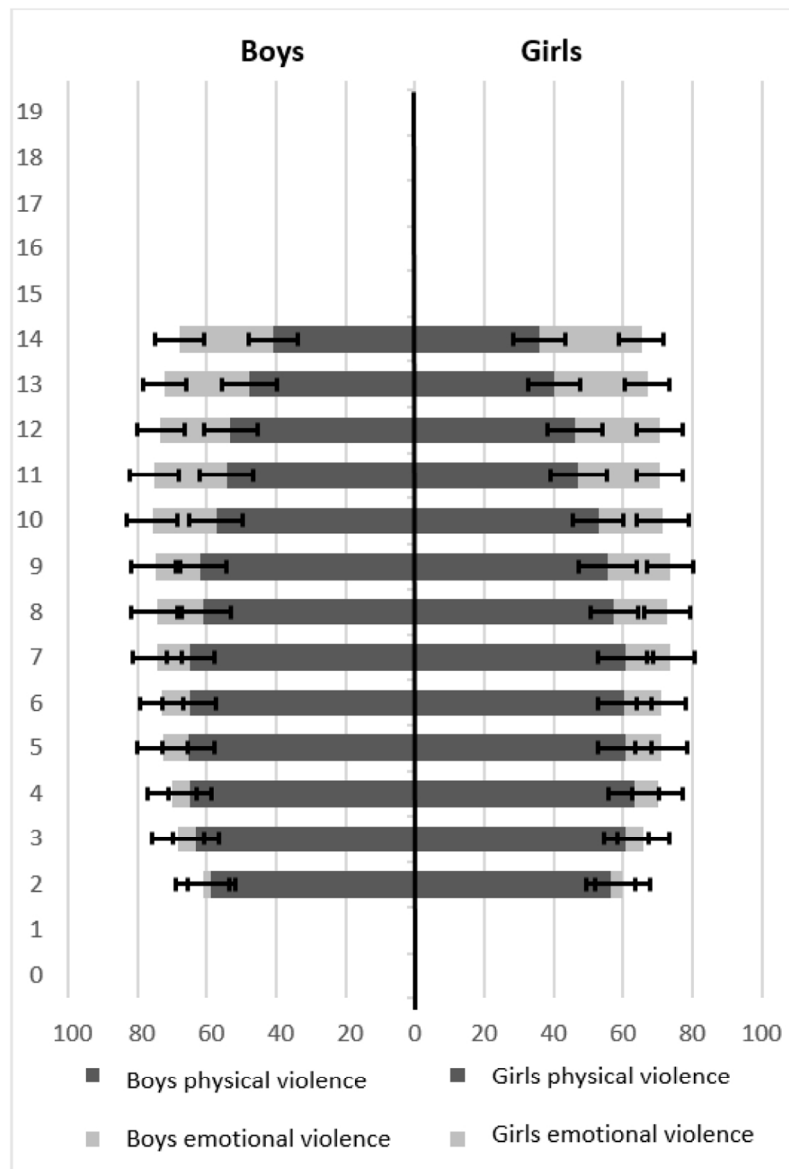
Figure 6. Prevalence of recent physical violence perpetrated by teachers, other authority figures and other adults against boys in the past 12 months

Estimates are children's self-reported exposure. Definitions are in Annex 3. To read the forest plot: for each year of age, perpetrator, data source and country are described along the y-axis. Along the x-axis, prevalence estimates from each are represented by a dot, with a bar drawn through to represent the 95% confidence interval.

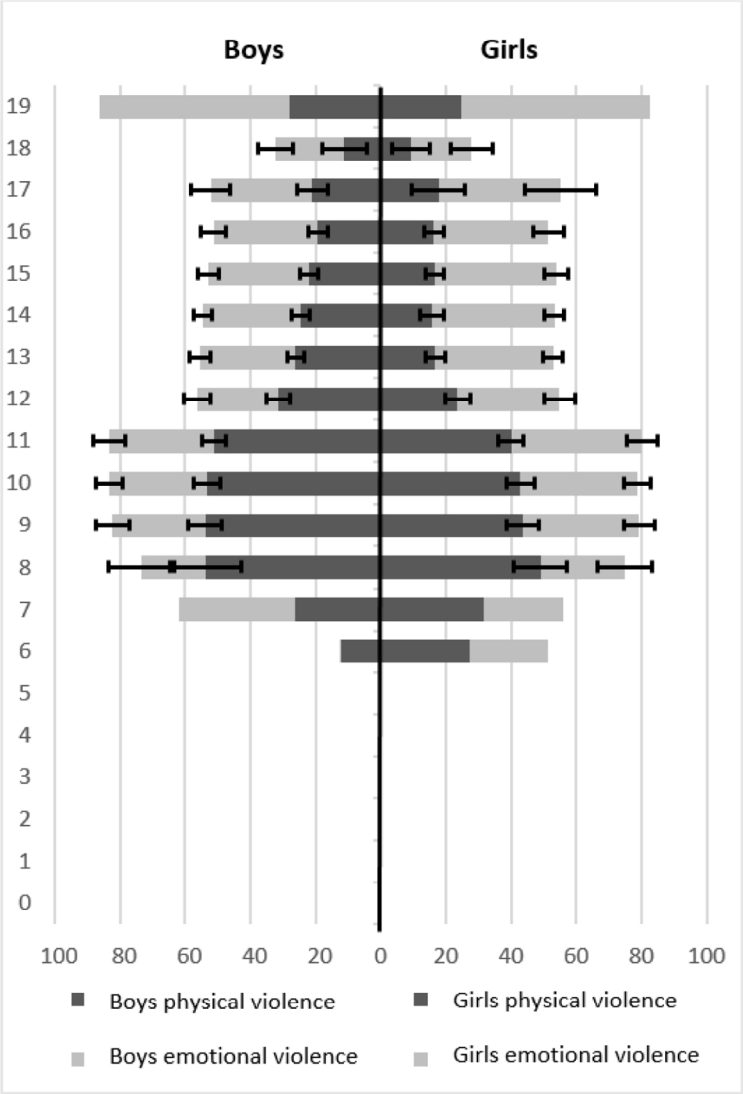
Figure 1. Flow chart describing data inclusion



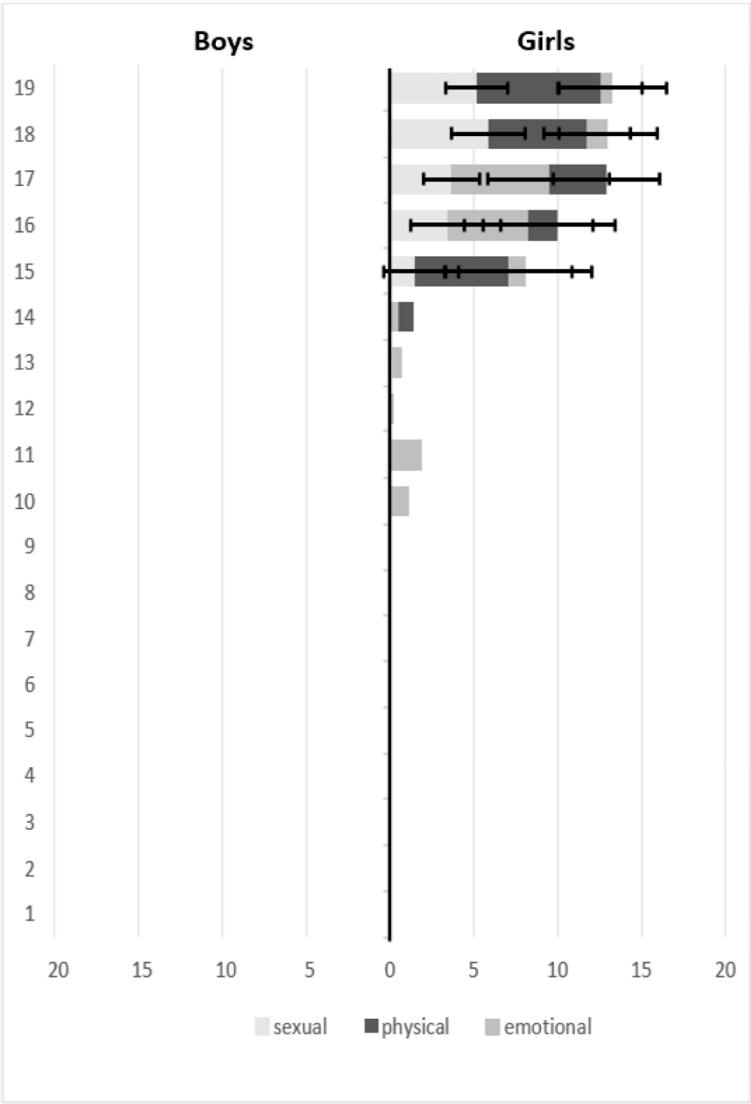
166x191mm (300 x 300 DPI)



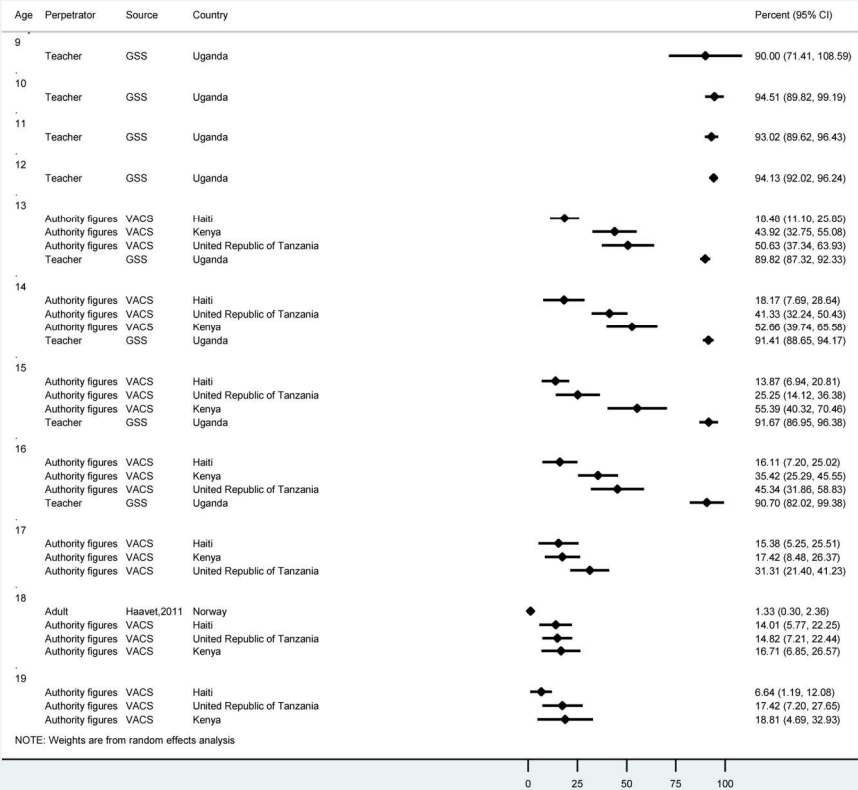
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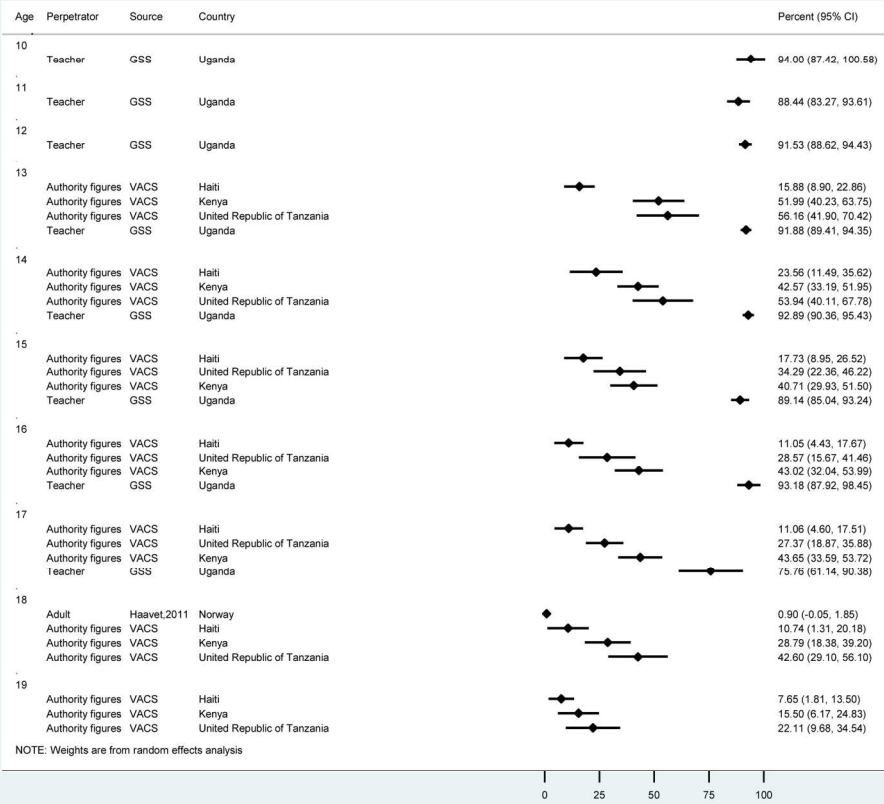
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Annex 1. Search strategy and databases searched

1.0 Ovid Medline: Searched on 7 December, 2015

1. Child Abuse/ OR Child Abuse, Sexual/
2. Child/ OR Adolescent/ OR Young Adult/ OR Infant/ OR Infant, Newborn/ OR Students/ OR Child, Preschool/
3. (child* OR adolescen* OR boy\$1 OR boyhood OR girl* OR teen* OR preteen* OR pubescen* OR prepubescen* OR youth* OR juvenile* OR preteen* OR pre teen* OR young people* OR young person* OR early adult* OR young adult* OR infan* OR baby OR babies OR school* OR pupil* OR student* OR nursery OR preschool* OR pre school* OR partner* or spouse* or peer* OR boyfriend* or boy friend* or girlfriend* or girl friend or acquaintance* or non stranger* or nonstranger*).ti,ab,kw.
4. 2 OR 3
5. Rape/ OR Sex Offenses/ OR Incest/ OR Violence/ OR Domestic Violence/ OR Partner Violence/ OR Spouse Abuse/ OR Battered Women/ OR Aggression/ OR Punishment/ OR Bullying/
6. (rape\$1 OR rapist OR incest OR polyvictim* OR poly victim* OR pedophil* OR paedophil* OR corporal punish* OR bully OR bullies OR anti bully* OR bully victim* OR cyberbull* OR cybervictim* OR neglect*).ti,ab,kw.
7. sex* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR re victim* OR offence* OR offense* OR molest* OR harass* OR exploit*).ti,ab,kw.
8. phys* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,ab,kw.
9. (emotion* OR psycholog* OR mental) adj2 (violen* OR abus* OR maltreat*).ti,ab,kw.
10. (gender or peer) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR harass*).ti,ab,kw.
11. (intimate partner OR domestic partner OR partner* OR relationship* OR spouse* OR boyfriend* OR boy friend* OR girlfriend* OR girl friend OR date OR dating OR acquaintance* OR non stranger* OR nonstranger*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,ab,kw.
12. (witness* OR expos*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR harass*).ti,ab,kw.
13. 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12
14. 4 AND 13
15. 1 OR 14
16. Prevalence/ OR Incidence/ OR Cross-sectional studies/ OR Observational study/ OR exp Cohort studies/
17. (cross sectional OR observational OR prevalence OR incidence OR transversal OR retrospective OR longitudinal OR survey* OR cohort OR follow up OR followup).ti,ab,kw.
18. 16 OR 17
19. 15 AND 18
20. exp Africa/ OR exp Americas/ OR exp Asia/ OR exp Australia/ OR exp Europe/ OR exp Islands/ OR exp Oceania/
21. (Afghanistan OR Albania OR Algeria OR Africa OR American Samoa OR Andorra OR Angola OR Anguilla OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Australia OR Austria OR Azerbaijan OR Bahamas OR Bahrain OR Bangladesh OR Barbados OR Belarus OR Belgium OR Belize OR Benin OR Bermuda OR Bhutan OR Bolivia OR Bosnia OR Botswana OR Bougainville OR Brazil OR British Indian Ocean OR British Virgin Islands OR Brunei OR Bulgaria OR Burkina Faso OR Burundi OR Cambodia OR Cameroon OR Canada OR Cape Verde Islands OR Cayman Islands OR Central African Republic OR Chad OR Central America OR Chile OR China OR Macau OR Taiwan OR Colombia OR Comoros OR Congo OR Cook Islands OR Costa Rica OR Ivory Coast OR Croatia OR Cuba OR Cyprus OR Czech Republic OR Denmark OR Djibouti OR Dominica OR Dominican Republic OR Ecuador OR England OR Egypt OR El Salvador OR Equatorial Guinea OR Eritrea OR Estonia OR Ethiopia OR Europe OR Faeroe Islands OR Falkland Islands OR Federated States of Micronesia OR Fiji OR Finland OR France OR French Guiana OR French Polynesia OR Gabon OR Gambia OR Georgia OR Germany OR Ghana OR Gibraltar OR Greece OR Greenland OR Grenada OR Guadeloupe OR Guam OR Guatemala OR Guinea OR Guinea-Bissau OR Guyana OR Haiti OR Holy See OR Honduras OR Hungary OR Iceland OR India OR Indonesia OR Iran OR Iraq OR Ireland OR Israel OR Italy OR Jamaica OR Japan OR Jordan OR Kazakhstan OR Kenya OR Kiribati OR Korea OR Kosovo OR Kuwait OR Kyrgyzstan OR Laos OR Latvia OR Lebanon OR Lesotho OR Liberia OR Libya OR Liechtenstein OR Lithuania OR Luxembourg OR Macedonia OR Madagascar

OR Malawi OR Malaysia OR Maldives OR Mali OR Malta OR Martinique OR Mauritania OR Mauritius OR Mayotte OR Mexico OR Moldova OR Monaco OR Mongolia OR Montenegro OR Montserrat OR Morocco OR Mozambique OR Myanmar OR Namibia OR Nauru OR Nepal OR Netherlands OR Netherlands Antilles OR New Caledonia OR New Zealand OR Nicaragua OR Niger OR Nigeria OR Norway OR Oman OR Pakistan OR Palestine OR Panama OR Papua New Guinea OR Paraguay OR Peru OR Philippines OR Poland OR Portugal OR Puerto Rico OR Qatar OR Romania OR Russia OR Rwanda OR Saint Barthelemy OR Saint Helena OR Saint Kitts OR Saint Lucia OR Saint Martin OR Saint Pierre OR Saint Vincent OR Samoa OR San Marino OR Sao Tome OR Saudi Arabia OR Scotland OR Senegal OR Serbia OR Seychelles OR Sierra Leone OR Singapore OR Slovakia OR Slovenia OR Solomon Islands OR Somalia OR South Africa OR Spain OR Sri Lanka OR Sudan OR Suriname OR Swaziland OR Sweden OR Switzerland OR Syria OR Tajikistan OR Tanzania OR Thailand OR Timor Leste OR Togo OR Tokelau Islands OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turks OR Caicos OR Tuvalu OR Uganda OR Ukraine OR United Arab Emirates OR United Kingdom OR United States OR Uruguay OR Virgin Islands OR Uzbekistan OR Vanuatu OR Venezuela OR Vietnam OR Futuna OR Wales OR Yemen OR Zambia OR Zimbabwe OR Reunion OR Sao Tome OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR New Hampshire OR New Jersey OR New Mexico OR New York OR North Carolina OR North Dakota OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR Rhode Island OR South Carolina OR South Dakota OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR West Virginia OR Wisconsin OR Wyoming).hw,ti,ab,kw.

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23. 19 and 22

24. (comment OR letter OR editorial OR conference abstract OR news OR newspaper article OR patient education handout OR case report).pt.

25. 23 NOT 24

26. systematic review.ti.

27. 25 NOT 26

28. exp animals/ not humans.sh.

29. 27 NOT 28

1.2 Ovid Embase: Searched on 7 December, 2015

1. exp Child Abuse/
2. Child/ OR Adolescent/ OR Young Adult/ OR Infant/ OR Newborn/ OR exp Student/ OR Preschool children/
3. (child* OR adolescen* OR boy\$1 OR boyhood OR girl* OR teen* OR preteen* OR pubescen* OR prepubescen* OR youth* OR juvenile* OR preteen* OR pre teen* OR young people* OR young person* OR early adult* OR young adult* OR infan* OR baby OR babies OR school* OR pupil* OR student* OR nursery OR preschool* OR pre school* OR partner* or spouse* or peer* OR boyfriend* or boy friend* or girlfriend* or girl friend or acquaintance* or non stranger* or nonstranger*).ti,kw.
4. 2 OR 3
5. exp Sexual assault/ OR Sexual crime/ OR Incest/ OR exp Violence/ OR Aggression/ OR Aggressiveness/ OR Bullying/ OR Hostility/
6. (rape\$1 OR rapist OR incest OR polyvictim* OR poly victim* OR pedophil* OR paedophil* OR corporal punish* OR bully OR bullies OR anti bully* OR bully victim* OR cyberbull* OR cybervictim* OR neglect*).ti,kw.
7. sex* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR re victim* OR offence* OR offense* OR molest* OR harass* OR exploit*).ti,kw.
8. phys* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,kw.
9. (emotion* OR psychologic* OR mental) adj2 (violen* OR abus* OR maltreat*).ti,kw.
10. (gender or peer) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR harass*).ti,kw.
11. (intimate partner OR domestic partner OR partner* OR relationship* OR spouse* OR boyfriend* OR boy friend* OR girlfriend* OR girl friend OR date OR dating OR acquaintance* OR non stranger* OR nonstranger*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,kw.

12. (witness* OR expos*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR harass*).ti,kw.
13. 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12
14. 4 AND 13
15. 1 OR 14
16. Cross-sectional study/ OR Prevalence/ OR Health Survey/ OR Observational Study/ OR Cohort Analysis/ OR Longitudinal Study/ OR Retrospective Study/
17. (cross sectional OR observational OR prevalence OR incidence OR transversal OR retrospective OR longitudinal OR survey* OR cohort OR follow up OR followup).ti,kw.
18. 16 OR 17
19. 15 AND 18
20. exp Eastern Hemisphere/ OR exp Western Hemisphere/ OR exp Pacific Islands/
21. (Afghanistan OR Albania OR Algeria OR Africa OR American Samoa OR Andorra OR Angola OR Anguilla OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Australia OR Austria OR Azerbaijan OR Bahamas OR Bahrain OR Bangladesh OR Barbados OR Belarus OR Belgium OR Belize OR Benin OR Bermuda OR Bhutan OR Bolivia OR Bosnia OR Botswana OR Bougainville OR Brazil OR British Indian Ocean OR British Virgin Islands OR Brunei OR Bulgaria OR Burkina Faso OR Burundi OR Cambodia OR Cameroon OR Canada OR Cape Verde Islands OR Cayman Islands OR Central African Republic OR Chad OR Central America OR Chile OR China OR Macau OR Taiwan OR Colombia OR Comoros OR Congo OR Cook Islands OR Costa Rica OR Ivory Coast OR Croatia OR Cuba OR Cyprus OR Czech Republic OR Denmark OR Djibouti OR Dominica OR Dominican Republic OR Ecuador OR England OR Egypt OR El Salvador OR Equatorial Guinea OR Eritrea OR Estonia OR Ethiopia OR Europe OR Faeroe Islands OR Falkland Islands OR Federated States of Micronesia OR Fiji OR Finland OR France OR French Guiana OR French Polynesia OR Gabon OR Gambia OR Georgia OR Germany OR Ghana OR Gibraltar OR Greece OR Greenland OR Grenada OR Guadeloupe OR Guam OR Guatemala OR Guinea OR Guinea-Bissau OR Guyana OR Haiti OR Holy See OR Honduras OR Hungary OR Iceland OR India OR Indonesia OR Iran OR Iraq OR Ireland OR Israel OR Italy OR Jamaica OR Japan OR Jordan OR Kazakhstan OR Kenya OR Kiribati OR Korea OR Kosovo OR Kuwait OR Kyrgyzstan OR Laos OR Latvia OR Lebanon OR Lesotho OR Liberia OR Libya OR Liechtenstein OR Lithuania OR Luxembourg OR Macedonia OR Madagascar OR Malawi OR Malaysia OR Maldives OR Mali OR Malta OR Martinique OR Mauritania OR Mauritius OR Mayotte OR Mexico OR Moldova OR Monaco OR Mongolia OR Montenegro OR Montserrat OR Morocco OR Mozambique OR Myanmar OR Namibia OR Nauru OR Nepal OR Netherlands OR Netherlands Antilles OR New Caledonia OR New Zealand OR Nicaragua OR Niger OR Nigeria OR Norway OR Oman OR Pakistan OR Palestine OR Panama OR Papua New Guinea OR Paraguay OR Peru OR Philippines OR Poland OR Portugal OR Puerto Rico OR Qatar OR Romania OR Russia OR Rwanda OR Saint Barthelemy OR Saint Helena OR Saint Kitts OR Saint Lucia OR Saint Martin OR Saint Pierre OR Saint Vincent OR Samoa OR San Marino OR Sao Tome OR Saudi Arabia OR Scotland OR Senegal OR Serbia OR Seychelles OR Sierra Leone OR Singapore OR Slovakia OR Slovenia OR Solomon Islands OR Somalia OR South Africa OR Spain OR Sri Lanka OR Sudan OR Suriname OR Swaziland OR Sweden OR Switzerland OR Syria OR Tajikistan OR Tanzania OR Thailand OR Timor Leste OR Togo OR Tokelau Islands OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turks OR Caicos OR Tuvalu OR Uganda OR Ukraine OR United Arab Emirates OR United Kingdom OR United States OR Uruguay OR Virgin Islands OR Uzbekistan OR Vanuatu OR Venezuela OR Vietnam OR Futuna OR Wales OR Yemen OR Zambia OR Zimbabwe OR Reunion OR Sao Tome OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR New Hampshire OR New Jersey OR New Mexico OR New York OR North Carolina OR North Dakota OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR Rhode Island OR South Carolina OR South Dakota OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR West Virginia OR Wisconsin OR Wyoming).hw,ti,kw.
22. 20 OR 21
23. 19 and 22
24. (letter OR editorial OR conference abstract OR report).pt.
25. 23 NOT 24
26. systematic review.ti.
27. 25 NOT 26
28. exp animal/ not human.sh.

29. 27 NOT 28

1.3 PsychInfo: Searched on 7 December, 2015

1. exp Child Abuse/ OR Child Neglect/ OR Child Sexual Abuse/
2. exp Students/
3. (child* OR adolescen* OR boy\$1 OR boyhood OR girl* OR teen* OR preteen* OR pubescen* OR prepubescen* OR youth* OR juvenile* OR preteen* OR pre teen* OR young people* OR young person* OR early adult* OR young adult* OR infan* OR baby OR babies OR school* OR pupil* OR student* OR nursery OR preschool* OR pre school* OR partner* or spouse* or peer* OR boyfriend* or boy friend* or girlfriend* or girl friend or acquaintance* or non stranger* or nonstranger*).ti,id.
4. 2 OR 3
5. exp Rape/ OR exp Sexual abuse/ OR Domestic Violence/ OR exp Partner Abuse/ OR Physical Abuse/ OR Sex offenses/ OR Verbal Abuse/ OR School Violence/ OR Violent Crime/ OR Exposure to Violence/ OR Family Crime/ OR exp Incest/ OR exp Bullying/ OR exp Aggressive Behavior/ OR Punishment/
6. (rape\$1 OR rapist OR incest OR polyvictim* OR poly victim* OR pedophil* OR paedophil* OR corporal punish* OR bully OR bullies OR anti bully* OR bully victim* OR cyberbull* OR cybervictim* OR neglect*).ti,id.
7. sex* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR re victim* OR offence* OR offense* OR molest* OR harass* OR exploit*).ti,id.
8. phys* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,id.
9. (emotion* OR psychologic* OR mental) adj2 (violen* OR abus* OR maltreat*).ti,id.
10. (gender or peer) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR harass*).ti,id.
11. (intimate partner OR domestic partner OR partner* OR relationship* OR spouse* OR boyfriend* OR boy friend* OR girlfriend* OR girl friend OR date OR dating OR acquaintance* OR non stranger* OR nonstranger*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,id.
12. (witness* OR expos*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR harass*).ti,id.
13. 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12
14. Limit 13 to (100 childhood OR 120 neonatal OR 140 Infancy <2 to 23 mo> OR 160 preschool age OR 180 school age OR 200 adolescence OR 320 Young adulthood)
15. 4 AND 14
16. 1 OR 15
17. Surveys/ OR Cohort analysis/ OR Longitudinal studies/
18. (cross sectional OR observational OR prevalence OR incidence OR transversal OR retrospective OR longitudinal OR survey* OR cohort OR follow up OR followup).ti,id.
19. 17 OR 18
20. 16 AND 19
21. exp Countries/
22. (Afghanistan OR Albania OR Algeria OR Africa OR American Samoa OR Andorra OR Angola OR Anguilla OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Australia OR Austria OR Azerbaijan OR Bahamas OR Bahrain OR Bangladesh OR Barbados OR Belarus OR Belgium OR Belize OR Benin OR Bermuda OR Bhutan OR Bolivia OR Bosnia OR Botswana OR Bougainville OR Brazil OR British Indian Ocean OR British Virgin Islands OR Brunei OR Bulgaria OR Burkina Faso OR Burundi OR Cambodia OR Cameroon OR Canada OR Cape Verde Islands OR Cayman Islands OR Central African Republic OR Chad OR Central America OR Chile OR China OR Macau OR Taiwan OR Colombia OR Comoros OR Congo OR Cook Islands OR Costa Rica OR Ivory Coast OR Croatia OR Cuba OR Cyprus OR Czech Republic OR Denmark OR Djibouti OR Dominica OR Dominican Republic OR Ecuador OR England OR Egypt OR El Salvador OR Equatorial Guinea OR Eritrea OR Estonia OR Ethiopia OR Europe OR Faeroe Islands OR Falkland Islands OR Federated States of Micronesia OR Fiji OR Finland OR France OR French Guiana OR French Polynesia OR Gabon OR Gambia OR Georgia OR Germany OR Ghana OR Gibraltar OR Greece OR Greenland OR Grenada OR Guadeloupe OR Guam OR Guatemala OR Guinea OR Guinea-Bissau OR Guyana OR Haiti OR Holy See OR Honduras OR Hungary OR Iceland OR India OR Indonesia OR Iran OR Iraq OR Ireland OR Israel OR Italy OR Jamaica OR Japan OR Jordan OR Kazakhstan OR Kenya OR Kiribati OR Korea OR Kosovo OR Kuwait OR Kyrgyzstan OR Laos OR Latvia OR Lebanon OR Lesotho OR

Liberia OR Libya OR Liechtenstein OR Lithuania OR Luxembourg OR Macedonia OR Madagascar OR Malawi OR Malaysia OR Maldives OR Mali OR Malta OR Martinique OR Mauritania OR Mauritius OR Mayotte OR Mexico OR Moldova OR Monaco OR Mongolia OR Montenegro OR Montserrat OR Morocco OR Mozambique OR Myanmar OR Namibia OR Nauru OR Nepal OR Netherlands OR Netherlands Antilles OR New Caledonia OR New Zealand OR Nicaragua OR Niger OR Nigeria OR Norway OR Oman OR Pakistan OR Palestine OR Panama OR Papua New Guinea OR Paraguay OR Peru OR Philippines OR Poland OR Portugal OR Puerto Rico OR Qatar OR Romania OR Russia OR Rwanda OR Saint Barthelemy OR Saint Helena OR Saint Kitts OR Saint Lucia OR Saint Martin OR Saint Pierre OR Saint Vincent OR Samoa OR San Marino OR Sao Tome OR Saudi Arabia OR Scotland OR Senegal OR Serbia OR Seychelles OR Sierra Leone OR Singapore OR Slovakia OR Slovenia OR Solomon Islands OR Somalia OR South Africa OR Spain OR Sri Lanka OR Sudan OR Suriname OR Swaziland OR Sweden OR Switzerland OR Syria OR Tajikistan OR Tanzania OR Thailand OR Timor Leste OR Togo OR Tokelau Islands OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turks OR Caicos OR Tuvalu OR Uganda OR Ukraine OR United Arab Emirates OR United Kingdom OR United States OR Uruguay OR Virgin Islands OR Uzbekistan OR Vanuatu OR Venezuela OR Vietnam OR Futuna OR Wales OR Yemen OR Zambia OR Zimbabwe OR Reunion OR Sao Tome OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR New Hampshire OR New Jersey OR New Mexico OR New York OR North Carolina OR North Dakota OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR Rhode Island OR South Carolina OR South Dakota OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR West Virginia OR Wisconsin OR Wyoming).hw,id,ti.

23. 21 OR 22

24. 20 and 23

25. limit 24 to (chapter OR column/opinion OR comment/reply OR editorial OR letter)

26. 24 NOT 25

27. systematic review.ti.

28. 26 NOT 27

29. exp animals/ NOT humans.sh.

30. 28 NOT 29

1.4 Global Health: Searched on 7 December, 2015

1. exp Child Abuse/ OR Child Neglect/

2. exp Children/ OR Adolescents/ OR Young Adults/ OR exp Infants/ OR exp Students/

3. (child* OR adolescen* OR boy\$1 OR boyhood OR girl* OR teen* OR preteen* OR pubescen* OR prepubescen* OR youth* OR juvenile* OR preteen* OR pre teen* OR young people* OR young person* OR early adult* OR young adult* OR infan* OR baby OR babies OR school* OR pupil* OR student* OR nursery OR preschool* OR pre school* OR partner* or spouse* or peer* OR boyfriend* or boy friend* or girlfriend* or girl friend or acquaintance* or non stranger* or nonstranger*).ti,id.

4. 2 OR 3

5. Sexual Assault/ OR Sexual Abuse/ OR Aggressive Behavior/ OR Domestic Violence/ OR Spouse Abuse/ OR Aggression/ OR Punishment/

6. (rape\$1 OR rapist OR incest OR polyvictim* OR poly victim* OR pedophil* OR paedophil* OR corporal punish* OR bully OR bullies OR anti bully* OR bully victim* OR cyberbull* OR cybervictim* OR neglect*).ti,id.

7. sex* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR re victim* OR offence* OR offense* OR molest* OR harass* OR exploit*).ti,id.

8. phys* adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,id.

9. (emotion* OR psycholog* OR mental) adj2 (violen* OR abus* OR maltreat*).ti,id.

10. (gender or peer) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim* OR harass*).ti,id.

11. (intimate partner OR domestic partner OR partner* OR relationship* OR spouse* OR boyfriend* OR boy friend* OR girlfriend* OR girl friend OR date OR dating OR acquaintance* OR non stranger* OR nonstranger*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR victim*).ti,id.

12. (witness* OR expos*) adj2 (violen* OR abus* OR assault* OR attack* OR aggressi* OR coerc* OR maltreat* OR harass*).ti,id.
13. 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12
14. 4 AND 13
15. 1 OR 14
16. Surveys/
17. (cross sectional OR observational OR prevalence OR incidence OR transversal OR retrospective OR longitudinal OR survey* OR cohort OR follow up OR followup).ti,id.
18. 16 OR 17
19. 15 AND 18
20. exp Africa/ OR exp America/ OR exp Asia/ OR exp Australia/ OR exp Europe/ OR exp Pacific Islands/ OR exp Oceania/
21. (Afghanistan OR Albania OR Algeria OR Africa OR American Samoa OR Andorra OR Angola OR Anguilla OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Australia OR Austria OR Azerbaijan OR Bahamas OR Bahrain OR Bangladesh OR Barbados OR Belarus OR Belgium OR Belize OR Benin OR Bermuda OR Bhutan OR Bolivia OR Bosnia OR Botswana OR Bougainville OR Brazil OR British Indian Ocean OR British Virgin Islands OR Brunei OR Bulgaria OR Burkina Faso OR Burundi OR Cambodia OR Cameroon OR Canada OR Cape Verde Islands OR Cayman Islands OR Central African Republic OR Chad OR Central America OR Chile OR China OR Macau OR Taiwan OR Colombia OR Comoros OR Congo OR Cook Islands OR Costa Rica OR Ivory Coast OR Croatia OR Cuba OR Cyprus OR Czech Republic OR Denmark OR Djibouti OR Dominica OR Dominican Republic OR Ecuador OR England OR Egypt OR El Salvador OR Equatorial Guinea OR Eritrea OR Estonia OR Ethiopia OR Europe OR Faeroe Islands OR Falkland Islands OR Federated States of Micronesia OR Fiji OR Finland OR France OR French Guiana OR French Polynesia OR Gabon OR Gambia OR Georgia OR Germany OR Ghana OR Gibraltar OR Greece OR Greenland OR Grenada OR Guadeloupe OR Guam OR Guatemala OR Guinea OR Guinea-Bissau OR Guyana OR Haiti OR Holy See OR Honduras OR Hungary OR Iceland OR India OR Indonesia OR Iran OR Iraq OR Ireland OR Israel OR Italy OR Jamaica OR Japan OR Jordan OR Kazakhstan OR Kenya OR Kiribati OR Korea OR Kosovo OR Kuwait OR Kyrgyzstan OR Laos OR Latvia OR Lebanon OR Lesotho OR Liberia OR Libya OR Liechtenstein OR Lithuania OR Luxembourg OR Macedonia OR Madagascar OR Malawi OR Malaysia OR Maldives OR Mali OR Malta OR Martinique OR Mauritania OR Mauritius OR Mayotte OR Mexico OR Moldova OR Monaco OR Mongolia OR Montenegro OR Montserrat OR Morocco OR Mozambique OR Myanmar OR Namibia OR Nauru OR Nepal OR Netherlands OR Netherlands Antilles OR New Caledonia OR New Zealand OR Nicaragua OR Niger OR Nigeria OR Norway OR Oman OR Pakistan OR Palestine OR Panama OR Papua New Guinea OR Paraguay OR Peru OR Philippines OR Poland OR Portugal OR Puerto Rico OR Qatar OR Romania OR Russia OR Rwanda OR Saint Barthelemy OR Saint Helena OR Saint Kitts OR Saint Lucia OR Saint Martin OR Saint Pierre OR Saint Vincent OR Samoa OR San Marino OR Sao Tome OR Saudi Arabia OR Scotland OR Senegal OR Serbia OR Seychelles OR Sierra Leone OR Singapore OR Slovakia OR Slovenia OR Solomon Islands OR Somalia OR South Africa OR Spain OR Sri Lanka OR Sudan OR Suriname OR Swaziland OR Sweden OR Switzerland OR Syria OR Tajikistan OR Tanzania OR Thailand OR Timor Leste OR Togo OR Tokelau Islands OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turks OR Caicos OR Tuvalu OR Uganda OR Ukraine OR United Arab Emirates OR United Kingdom OR United States OR Uruguay OR Virgin Islands OR Uzbekistan OR Vanuatu OR Venezuela OR Vietnam OR Futuna OR Wales OR Yemen OR Zambia OR Zimbabwe OR Reunion OR Sao Tome OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR New Hampshire OR New Jersey OR New Mexico OR New York OR North Carolina OR North Dakota OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR Rhode Island OR South Carolina OR South Dakota OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR West Virginia OR Wisconsin OR Wyoming).hw,ti,id.
22. 20 OR 21
23. 19 and 22
24. (comment OR letter OR editorial OR conference abstract OR news OR newspaper article OR patient education handout OR case report).pt.
25. 23 NOT 24
26. systematic review.ti.
27. 25 NOT 26

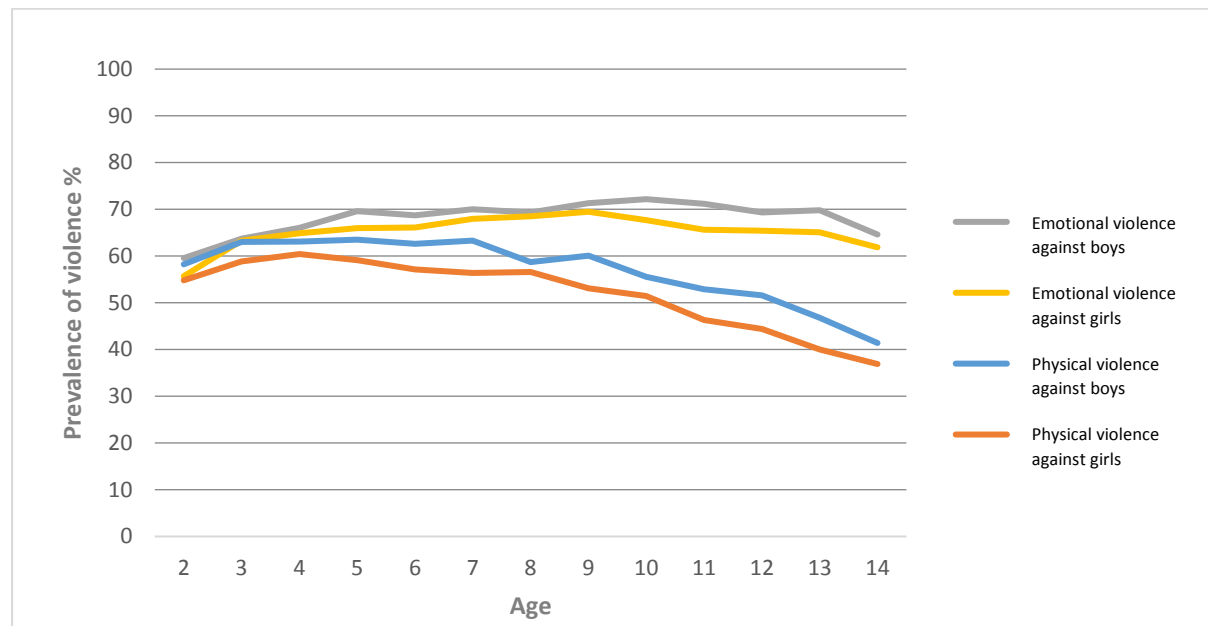
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- 28. exp animals/
- 29. exp man/
- 30. 28 NOT (28 and 29)
- 31. 27 NOT 30

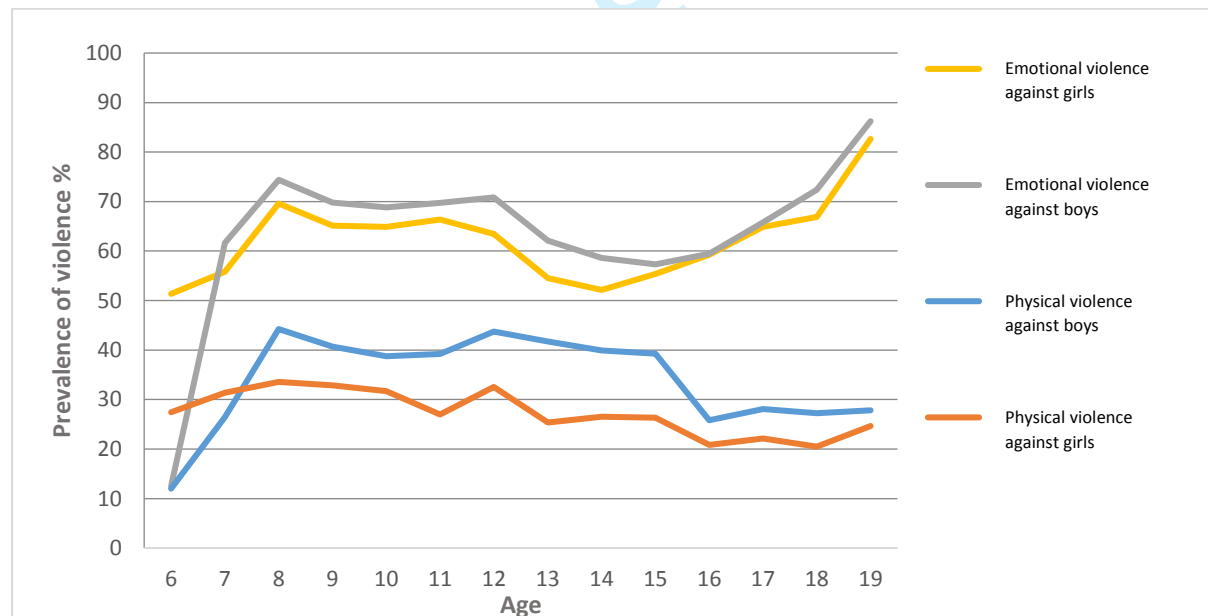
Confidential: For Review Only

Annex 2. Unadjusted global violence prevalence estimates of violence against children

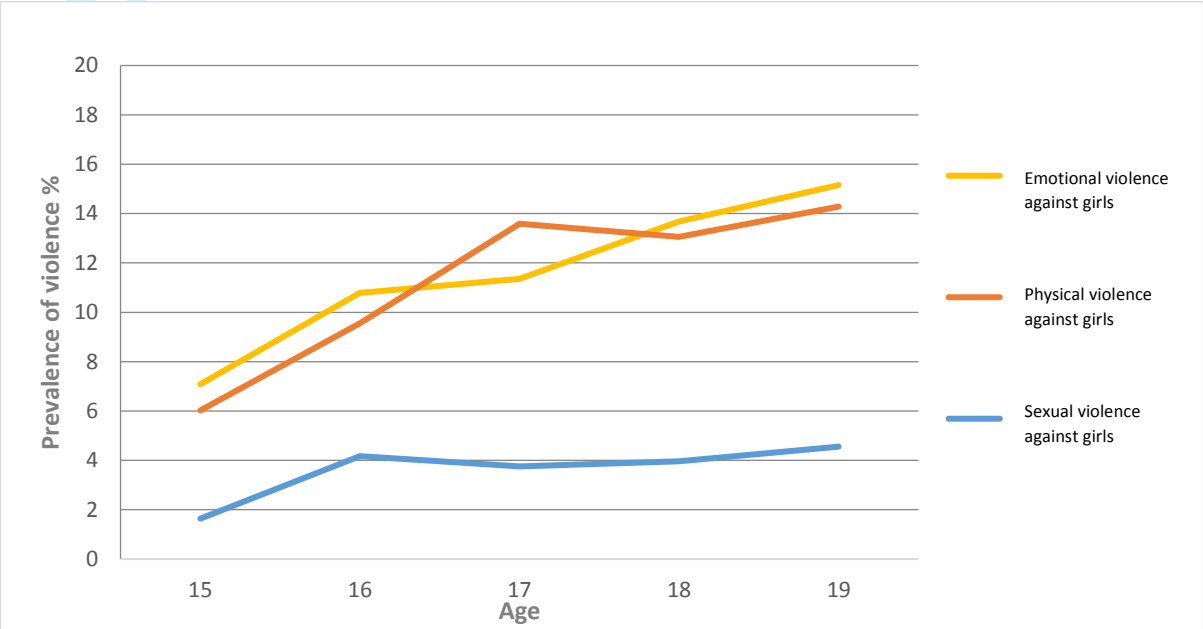
2.0 Prevalence of physical and emotional violence perpetrated by household members against boys and girls in the past month, by age of child (unadjusted global pooled estimates)



2.1 Prevalence of physical and emotional violence perpetrated by students against boys and girls in the past 12 months, by age of child (unadjusted global pooled estimates)



2.2 Physical, emotional and sexual violence perpetrated by intimate or dating partners against girls in the past 12 months, by age of girl (unadjusted global pooled estimates - adjusted by population ever had sex only)



Annex 3. Definitions of violence and sources of data for meta-regression models

Note: All violence recall timeframes are in the last 12 months unless stated otherwise.

3.0 Definitions of physical and emotional violence from household members

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|------------------|--|
| Multiple Indicator Cluster Surveys (MICS), ¹ Demographic and Health Surveys (DHS) ² | Proxy reports from caregivers about violence from household members | Physical | Adapted Conflict Tactics Scale. Answered 'yes' or 'no' to the following: Adults use certain ways to teach children the right behaviour or to address a behaviour problem. I will read various methods that are used. Please tell me if you or anyone else in your household has used this method with (name) in the past month: 1) Shook him/her; 2) Spanked, hit or slapped him/her on the bottom with bare hand; 3) Hit him/her on the bottom or elsewhere on the body with something like a belt, hairbrush, stick or other hard object; 4) Hit or slapped him/her on the face, head or ears; 5) Hit or slapped him/her on the hand, arm, or leg; 6) Beat him/her up, that is hit him/her over and over as hard as can. A child was considered exposed if having experienced at least 1 act of violence, according to the caregiver report. |
| MICS, ¹ DHS ² | Proxy reports from caregivers about violence from household members | Emotional | Adapted Conflict Tactics Scale. Answered 'yes' or 'no' to the following: Adults use certain ways to teach children the right behaviour or to address a behaviour problem. I will read various methods that are used. Please tell me if you or anyone else in your household has used this method with (name) in the past month. 1) Shouted, yelled at or screamed at him/her; 2) Called him/her dumb, lazy, or another name like that. (took away privileges, forbade something (name) liked or did not allow him/her to leave the house. – not included.) A child was considered exposed if having experienced at least 1 act of violence, according to the caregiver report. |
| Good Schools Study (GSS) ³ | Children's self reports (not included in main regression model; detailed in Annex 7) | Physical | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI). Answered 'yes' or 'no' to the following: Has [a parent or caregiver or another relative] ever: 1) Twisted your arm or any other body part, slapped you, pushed you or thrown something at you? 2) Punched you, kicked you, or hit you with a closed fist? 3) Hit you with an object, such as a stick or a cane, or whipped you? 4) Cut you with a sharp object or burnt you? A child was considered exposed if reporting having experienced at least 1 act of violence. |

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|------------------|---|
| GSS ³ | Children's self reports (not included in main regression model; detailed in Annex 7) | Emotional | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI). Answered 'yes' or 'no' to the following: Has [a parent or caregiver or another relative] ever: 1) Insulted you, or called you rude or hurtful names? 2) Accused you of witchcraft? 2) Locked you out or made you stay outside? 4) Not given you food? A child was considered exposed if reporting having experienced at least 1 act of violence. |
| Violence Against Children Surveys (VACS) ⁴ | Children's self reports (not included in main regression model; detailed in Annex 7) | Physical | Answered 'yes' or 'no' to the following: Kenya and Tanzania: 1) Has a parent or any adult relative ever punched you, kicked you, whipped you, or beat you with an object? 2) Has a parent or any adult relative ever used or threatened to use a knife or other weapon against you? Haiti: 1) Has/did a parent, caregiver, any adult relative, or another adult household member ever punch you, kick you, whip you, or beat you with an object? 2) Has/did a parent, caregiver, any adult relative, or another adult household member ever choke you, smother you or try to drown you? 3) Has/did a parent, caregiver, any adult relative, or another adult household member ever burn or scald you intentionally (including putting hot pepper in your mouth or on another body part)? 4) Has/did a parent, caregiver, any adult relative, or another adult household member ever use or threaten to use a knife or other weapon against you? A child was considered exposed if reporting having experienced at least 1 act of violence. |
| VACS ⁴ | Children's self reports (not included in main regression model; detailed in Annex 7) | Emotional | Haiti: 1) Has/did a parent, caregiver, any adult relative, or another adult household member ever say that you were not loved or did not deserve to be loved?, 2) Has/did a parent, caregiver, any adult relative, or another adult household member ever say that they wished you had never been born or were dead?, 3) Has/did a parent, caregiver, any adult relative, or another adult household member ever ridicule you or put you down (for example say that you were stupid or useless)?, 4) Has/did a parent, caregiver, any adult relative, or another adult household member ever threaten to abandon you or threaten you that they would force you to leave home? A child was considered exposed if reporting having experienced at least 1 act of violence. |

| Data source | Notes | Form of Violence | Definition of violence |
|----------------------------------|--|------------------|--|
| Helweg-Larsen, 2012 ⁵ | Children's self reports (not included in main regression model; detailed in Annex 7) | Physical | Danish version of the Conflict Tactics Scale created by Straus. The scale consists of 14 items beginning with aggressive verbalization by the parent towards the child and moving to severe physically violent acts. Participants responded by indicating whether they had experienced such acts (1 = yes) or not (0 = no) during the previous 12 months. An adolescent was considered to have been exposed to physical violence if reporting having experienced at least one act of mild or severe physical violence. (recall: 12 months) |

3.1 Physical violence from students, data sources by age- boys

| age | Sys Rev | GSHS | HBSC | PIRL | TIMSS | Total |
|-------|------------|------|------|------|-------|-------|
| 6 | 1 | 0 | 0 | 0 | 0 | 1 |
| 7 | 0 | 0 | 0 | 3 | 3 | 6 |
| 8 | 0 | 0 | 0 | 30 | 22 | 52 |
| 9 | 0 | 0 | 0 | 129 | 83 | 212 |
| 10 | 0 | 0 | 0 | 139 | 91 | 230 |
| 11 | 0 | 0 | 42 | 127 | 81 | 250 |
| 12 | 0 | 90 | 0 | 76 | 100 | 266 |
| 13 | 0 | 103 | 42 | 36 | 169 | 350 |
| 14 | 1 | 105 | 0 | 12 | 156 | 274 |
| 15 | 1 | 105 | 42 | 4 | 139 | 291 |
| 16 | 1 | 9 | 0 | 2 | 107 | 119 |
| 17 | 0 | 7 | 0 | 1 | 65 | 73 |
| 18 | 0 | 0 | 0 | 0 | 30 | 30 |
| 19 | 0 | 0 | 0 | 0 | 3 | 3 |
| Total | 4 | 419 | 126 | 559 | 1,049 | 2,157 |

3.2 Physical violence from students, data sources by age- girls

| age | Sys Rev | GSHS | HBSC | PIRL | TIMSS | Total |
|-------|------------|------|------|------|-------|-------|
| 6 | 1 | 0 | 0 | 0 | 1 | 2 |
| 7 | 0 | 0 | 0 | 3 | 2 | 5 |
| 8 | 0 | 0 | 0 | 29 | 22 | 51 |
| 9 | 0 | 0 | 0 | 129 | 82 | 211 |
| 10 | 0 | 0 | 0 | 139 | 89 | 228 |
| 11 | 0 | 0 | 42 | 119 | 77 | 238 |
| 12 | 0 | 92 | 0 | 71 | 101 | 264 |
| 13 | 0 | 104 | 42 | 31 | 159 | 336 |
| 14 | 1 | 104 | 0 | 7 | 156 | 268 |
| 15 | 1 | 104 | 42 | 4 | 134 | 285 |
| 16 | 1 | 9 | 0 | 2 | 99 | 111 |
| 17 | 0 | 7 | 0 | 0 | 58 | 65 |
| 18 | 0 | 0 | 0 | 0 | 26 | 26 |
| 19 | 0 | 0 | 0 | 0 | 2 | 2 |
| Total | 4 | 420 | 126 | 534 | 1008 | 2092 |

3.3 Emotional violence from students, data sources per age- boys

| source | | | | |
|--------|---------|------|-------|-------|
| age | Sys Rev | PIRL | TIMSS | Total |
| 6 | 1 | 0 | 0 | 1 |
| 7 | 0 | 1 | 3 | 4 |
| 8 | 0 | 16 | 22 | 38 |
| 9 | 0 | 51 | 83 | 134 |
| 10 | 0 | 56 | 91 | 147 |
| 11 | 0 | 52 | 81 | 133 |
| 12 | 0 | 30 | 100 | 130 |
| 13 | 0 | 14 | 169 | 183 |
| 14 | 2 | 7 | 156 | 165 |
| 15 | 1 | 3 | 139 | 143 |
| 16 | 0 | 2 | 107 | 109 |
| 17 | 1 | 1 | 65 | 67 |
| 18 | 0 | 0 | 30 | 30 |
| 19 | 0 | 0 | 3 | 3 |
| Total | 5 | 233 | 1,049 | 1,287 |

Note: emotional cyber bullying not included in regression models (Data sources: HSBC and publications).

3.4 Emotional violence from students, data source per age- girls

| age | Sys Rev | PIRL | TIMSS | Total |
|-------|---------|------|-------|-------|
| 6 | 1 | 0 | 1 | 2 |
| 7 | 0 | 0 | 2 | 2 |
| 8 | 0 | 16 | 22 | 38 |
| 9 | 0 | 51 | 82 | 133 |
| 10 | 0 | 56 | 89 | 145 |
| 11 | 0 | 50 | 77 | 127 |
| 12 | 0 | 25 | 102 | 127 |
| 13 | 0 | 13 | 160 | 173 |
| 14 | 2 | 4 | 157 | 163 |
| 15 | 1 | 3 | 135 | 139 |
| 16 | 0 | 2 | 100 | 102 |
| 17 | 1 | 0 | 59 | 60 |
| 18 | 0 | 0 | 26 | 26 |
| 19 | 0 | 0 | 2 | 2 |
| Total | 5 | 220 | 1,014 | 1,239 |

Note: cyber emotional bullying not included in regression models (Data sources: HSBC and publications).

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3.5 Definitions of physical and emotional violence from students

| Data source | Notes | Form of Violence | Definition of violence |
|---|-------------------------|------------------|---|
| Global School-based Student Health Survey (GSHS) ⁶ | Children’s self reports | Physical | Physical attack or physical fight in the last 12 months. Some GSHS only ask about physical fights in last 12 months |
| Health Behaviour in School-Aged Children (HBSC) ⁷ | Children’s self reports | Physical | Physical fight in the last 12 months |
| Trends in International Mathematics and Science Study (TIMSS), Progress in the Evaluation of Educational Achievement (PIRLS) ⁸ | Children’s self reports | Physical | Hit or hurt by another student at school. Some older PIRLS surveys may have used “injured by another student”. All 2011 surveys asked about the last 12 months and all surveys prior to 2011 asked about experience in the last month. |
| Marsh, 2010 ⁹ | Children’s self reports | Physical | Participants reported the frequency with which they themselves had experienced this year at school: physically hurting (Nairn & Smith, 2002). Item responses were on a 4-point scale with 1=often and 4=never. 12 months recall. |
| Undheim, 2010 ¹⁰ | Children’s self reports | Physical | I am tormented, beaten, pulled by the hair, kicked, or attacked in a bad way (physical assault). Rated on a 0- to 5-point scale from never to more than three times a week during the past 6 months, in school or on the way to school. Reported prevalence for 12 to 15 year olds, included in analysis as 14 years. |
| Zhou, 2015 ¹¹ | Children’s self reports | Physical | Similar question asked for peer physical violence (not explicitly given) "Did a group of kids or gang hit, jump, or attack you?". 12 months recall. Reported prevalence for 15 to 17 year olds, included in analysis as 16 years. |
| Jansen, 2012 ¹² | Proxy report by teacher | Physical | Bullying and victimization during the past three months were studied as outcome. The teacher of each elementary school child rated the occurrence of four victimization and four bullying items. The victimization items assessed 1) whether a child was physically victimized by other children, for instance by being hit, kicked, pinched, or bitten (further referred to as physical victimization), etc. |

| Data source | Notes | Form of Violence | Definition of violence |
|---------------------------------|-------------------------|------------------|---|
| TIMSS, PIRLS ⁸ | Children's self reports | Emotional | TIMSS 2003 and 2007 asked about during the last month at school: was something stolen from you, were you made fun of or called names, left out of games or activities by other students, were you made to do things you didn't want to do by other students. PIRLS 2011 asked three of the same questions, but did not ask "were you made to do things you didn't want to" but asked instead "did someone spread lies about you at school" and TIMSS 2011 asked all five emotional violence questions. PIRLS 2011 and TIMSS 2011 asked about the last 12 months. |
| Jansen, 2012 ¹² | Proxy report by teacher | Emotional | Bullying and victimization during the past three months were studied as outcome. The teacher of each elementary school child rated the occurrence of four victimization and four bullying items [20]. The victimization items assessed 2) whether a child was verbally victimized, such as being teased, laughed at, or called names (verbal victimization); etc |
| Undheim, 2010 ¹⁰ | Children's self reports | Emotional | "I am made a fool of, teased in a painful way, or somebody has said mean things to me (teasing); Rated on a 0- to 5-point scale from never to more than three times a week during the past 6 months, in school or on the way to school. Reported for 12 to 15 year olds, included in analysis as 14 years. |
| Serra-Negra, 2015 ¹³ | Children's self reports | Emotional | Prior to the application of the questionnaire, the adolescents received explanations about what school bullying actually entails. Verbal school bullying was considered to be the occurrence of episodes in which the teen was bullied or harassed by a colleague or a group of adolescents in the school. Repeated provocation was also considered as verbal school bullying. Being a victim of verbal school bullying was identified using the following question, taken from the Brazilian National School-Based Adolescent Health Survey (PeNSE): In the last thirty days, have some of your classmates bullied or mocked you so much that you got hurt/annoyed/upset? The response options were as follows: 1) never; 2) rarely; 3) always or almost always. Reported prevalence for 13 to 15 year olds, included in analysis as 14 years. |

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| Data source | Notes | Form of Violence | Definition of violence |
|-------------------------------|-------------------------|------------------|---|
| Marsh, 2010 ⁹ | Children's self reports | Emotional | Participants reported the frequency with which they themselves had both experienced this year at school: teasing/name calling. Item responses were on a 4-point scale with 1=often and 4=never. 12 month recall. |
| Landstedt, 2011 ¹⁴ | Children's self reports | Emotional | During the past 12 months, participant experienced one or several of the following acts in school: Been socially excluded; Experienced somebody spreading false rumours about you and/or Experienced racist comments or actions. This definition of bullying only addresses emotional violence. |

3.6 Partner physical violence, data source per age- girls

| age | DHS | Sys Rev | GSS | RHS | VACS | WHO VAW | Total |
|--------------|-----|---------|-----|-----|------|---------|-------|
| 15 | 26 | 2 | 1 | 5 | 2 | 2 | 38 |
| 16 | 47 | 1 | 1 | 6 | 2 | 5 | 62 |
| 17 | 56 | 5 | 0 | 6 | 2 | 8 | 77 |
| 18 | 62 | 0 | 0 | 6 | 2 | 10 | 80 |
| 19 | 65 | 0 | 0 | 6 | 2 | 11 | 84 |
| Total | 256 | 8 | 2 | 29 | 10 | 36 | 341 |

3.7 Partner physical violence question definitions, against girls

| Data source | Notes | Form of Violence | Definition of violence |
|--|---|------------------|---|
| Demographic and Health Survey (DHS) ² | Children's self reports. Three questions. | Physical | 1) thrown something at her 2) beaten her up, 3) threatened her with a gun. |
| DHS ² | Children's self reports. Six questions. | Physical | 1) pushed her, shaken her, thrown something at her, 2) slap her or twist her arm, 3) punched her with his fist or with something that could hurt her 4) kicked her, dragged her, 5) tried to strangle her or burn her, 6) threatened her with a knife, gun or other type of weapon. |
| DHS ² | Children's self reports. Seven questions: | Physical | 1) pushed her, hit her, thrown something at her 2) slapped her, 3) twisted her arm, or pulled her hair 4) punched her with his fist or with something that could hurt her 5) kicked her, dragged her, 6) tried to choke her or burn her, or 7) threatened or attacked her with a knife, gun or other type of weapon. |
| DHS ² | Children's self reports. Eight questions. | Physical | 1) pushed her, shaken her, thrown something at her 2) slapped her, 3) punched her with his fist or with something that could hurt her 4) kicked her, dragged her or beaten her up, 5) tried to choke her or burn her, or 6) threatened with a knife, gun or other type of weapon, 7) attacked with a knife, gun or other type of weapon, 8) bitten her. |
| Reproductive Health Survey (RHS) ¹⁵ | Children's self reports. Five questions. | Physical | 1) pushed her, shaken her, or threw something at her, 2) slapped her or twisted her arm, 3) hit her with his fist or something else that could hurt her, 4) kicked her, dragged her, or beat her up, 5) threatened to use a knife, gun, or another object to hurt her. |

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|------------------|--|
| RHS ¹⁵ | Children's self reports. Five questions. | Physical | 1) slapped her or threw something at her that could hurt her, 2) pushed her, shoved her, or pulled her hair, 3) hit her with his fist or with something else that could hurt her, 4) kicked her, dragged her or beat her up, 5) tried to choke or burn her on purpose |
| RHS ¹⁵ | Children's self reports. Six questions. | Physical | 1) slapped her or threw something at her that could hurt her, 2) pushed her, shoved her, or pulled her hair, 3) hit her with his fist or something else that could hurt her, 4) kicked her, dragged her, or beat her up, 5) tried to choke or burn her on purpose, 6) threatened to use or has used a gun, knife or other weapon against her |
| Violence against Children Survey (VACS) ⁴ | Children's self reports. | Physical | 1) slap or push, 2) punch, kick, whip or beat, 3) threaten or use a weapon. |
| WHO Multi-Country Study on Women's Health and Domestic Violence ¹⁶ | Children's self reports. | Physical | Slapped you or thrown something at you that could have hurt you, pushed you or shoved you, Hit you with his fist or with something else that could have hurt you, kicked you, dragged you or beaten you up, choked or burnt you on purpose, threatened to use or actually used a gun, knife or other weapon against you. |
| Good Schools Study (GSS) | Children's self reports. | Physical | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI) 1) Twisted your arm or any other body part, slapped you, pushed you or thrown something at you? 2) Punched you, kicked you, or hit you with a closed fist? 3) Hit you with an object, such as a stick or a cane, or whipped you? 4) Cut you with a sharp object or burnt you? |
| Ackerson, 2008 ¹⁷ | Children's self reports. | Physical | How often have you been beaten or mistreated physically in the last 12 months: once, a few times, many times, or not at all? A woman was considered to have experienced recent IPV if she reported being physically abused by her husband in the previous 12 months. Reported prevalence for 15 to 19 year olds, included in analysis as 17 years. |
| Blitchtein-Winicki, 2012 ¹⁸ | Children's self reports. | Physical | Recent physical violence (within the past 12 months) from a partner" to assess prevalence of women having suffered any kind of physical aggression from a partner. This was measured by a scale of 9 questions about the most recent husband's actions in the past 12 months: Did he push, hit, or throw something at you? Did he slap you or twist your arm? Did he hit you with a fist or something that would hurt you? Did he kick or drag you? Did he strangle or burn you? Did he attack/assault you? Did he |

| Data source | Notes | Form of Violence | Definition of violence |
|-------------------------------|--------------------------|------------------|--|
| | | | threaten you with a knife, gun, or other weapon? Did he use physical force to force you to have sex, even if you did not want to? Did he force you to perform sexual acts that you did not consent to? If the answer was "Yes," the survey asked, "How often did this happen in the past 12 months?". Reported prevalence for 15 to 19 year olds, included in analysis as 17 years. |
| Dalal, 2013 ¹⁹ | Children's self reports. | Physical | The survey data collected on IPV in the recent 12 months (with the latest/current husband) were transformed into the following variable: Moderate physical violence: had the husband ever pushed, shaken or thrown something; ever slapped; ever punched with a fist or something harmful; ever kicked or dragged. Reported prevalence for 15 to 19 year olds, included in analysis as 17 years. |
| Silverman, 2004 ²⁰ | Children's self reports. | Physical | Physical dating violence against adolescent girls was assessed by inquiring as follows: during the past 12 months, did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose? |
| Spriggs, 2009 ²¹ | Children's self reports. | Physical | The first was based on three items from the Conflict Tactics Scale (CTS2) that were included in the Wave II in-home questionnaire. For up to six romantic and/or sexual relationships reported since the last interview (approximately 18 months), respondents were asked if their partner had ever: (1) threatened them with violence; (2) thrown something at them that could hurt them; and/or (3) pushed or shoved them. A dichotomous summary variable (Any Victimization) was constructed indicating whether any of these experiences occurred in any of the relationships reported by the respondent. Reported prevalence for 13 to 17 year olds, included in analysis as 15 years. |
| Zablotska, 2009 ²² | Children's self reports. | Physical | Regarding physical violence, women were asked: Has any of your sexual partners ever and in the past 12 months, has your husband/partner: Verbally abused or shouted at you? Pushed, pulled, slapped or held you down? Punched you? Kicked or dragged you? Tried to strangle you or burn you? Threatened or attacked you with a knife, gun or other weapon? (Yes/No for each). Physical abuse (ever and in the past 12 months) was defined as at least one positive response versus none during the specified time. Reported prevalence for 15 to 19 year olds, included in analysis as 17 years. |

3.8 Partner emotional violence, data source per age- girls

| age | DHS | GSS | RHS | WHO VAW | Total |
|-------|-----|-----|-----|------------|-------|
| 15 | 24 | 1 | 5 | 2 | 32 |
| 16 | 45 | 1 | 6 | 5 | 57 |
| 17 | 54 | 0 | 6 | 8 | 68 |
| 18 | 59 | 0 | 6 | 10 | 75 |
| 19 | 62 | 0 | 6 | 11 | 79 |
| Total | 244 | 2 | 29 | 36 | 311 |

3.9 Partner emotional violence question definitions, against girls

| Data source | Notes | Form of Violence | Definition of violence |
|--|--|------------------|--|
| Demographic and Health Survey (DHS) ² | Children’s self reports. Two questions | Emotional | 1) said or done something to humiliate her in front of others, 2) harassed her. |
| DHS ² | Children’s self reports. Two questions | Emotional | 1) said or done something to humiliate her in front of others; 2) threatened to hurt or harm her or someone close to her. |
| DHS ² | Children’s self reports. Three questions | Emotional | 1) said or done something to humiliate her in front of others; 2) threatened to hurt or harm her or someone close to her; 3) insulted her or made her feel bad about herself |
| DHS ² | Children’s self reports. Three questions | Emotional | 1) said or done something to humiliate her in front of others; 2) threatened to hurt or harm her or someone close to her; 3) swear at her. |
| Reproductive Health Surveys (RHS) ¹⁵ | Children’s self reports. Two questions | Emotional | 1) insulted her or made her feel bad about herself, 2) threatened to hurt her or someone she cares about. |
| RHS ¹⁵ | Children’s self reports. Three questions | Emotional | 1) done something to humiliate her, 2) shouted at, insulted or called offensive names, 3) threatened to harm her or someone close to her. |

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|------------------|--|
| RHS ¹⁵ | Children's self reports. Four questions. | Emotional | 1) insulted her or made her feel bad about herself, 2) belittled her or humiliated her in front of others, 3) done things on purpose to scare or intimidate her (for example by the way he looks at her, how he yells or breaks things), 4) threatened to harm her or someone close to her. |
| RHS ¹⁵ | Children's self reports. Five questions. | Emotional | 1) insulted her or made her feel bad about herself, 2) belittled her or humiliated her in front of others, 3) done things on purpose to scare or intimidate her (for example by the way he looks at her, how he yells or breaks things), 4) threatened to harm her or someone close to her, 5) threatened to take away her children. |
| WHO Multi-Country Study on Women's Health and Domestic Violence ¹⁶ | Children's self reports. | Emotional | 1) Insulted you or made you feel bad about yourself, 2) Belittled or humiliated in front of other people, 3) Did thing to scare or intimidate you on purpose, 4) Threatened to hurt you or someone you cared about. |
| Good Schools Study (GSS) ³ | Children's self reports. | Emotional | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI) 1) Insulted you, or called you rude or hurtful names? 2) Accused you of witchcraft? 2) Locked you out or made you stay outside? 4) Not given you food? |

3.10 Partner sexual violence, data source per age- girls

| age | Source | | | | | Total |
|--------------|--------|---------|-----|-----|---------|-------|
| | DHS | Sys Rev | GSS | RHS | WHO VAW | |
| 15 | 26 | 0 | 1 | 5 | 2 | 34 |
| 16 | 47 | 1 | 1 | 6 | 5 | 60 |
| 17 | 55 | 2 | 0 | 6 | 8 | 71 |
| 18 | 61 | 0 | 0 | 6 | 10 | 77 |
| 19 | 64 | 0 | 0 | 6 | 11 | 81 |
| Total | 253 | 3 | 2 | 29 | 36 | 323 |

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3.11 Partner sexual violence question definitions, against girls

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|------------------|---|
| Demographic and Health Surveys (DHS) ² | Children’s self reports. One question. | Sexual | 1) physically forced her to have sexual intercourse even when she did not want to. |
| DHS ² | Children’s self reports. Two questions | Sexual | 1) physically forced her to have sexual intercourse or 2) forced her to perform any other sexual acts. |
| DHS ² | Children’s self reports. Three questions | Sexual | 1) physically forced her to have unwanted sexual intercourse or 2) forced her to perform any other unwanted sexual acts, 3) forced her with threats or in any other way to perform sexual acts she did not want to. |
| DHS ² | Children’s self reports. Four questions | Sexual | 1) physically forced her to have unwanted sexual intercourse or 2) forced her to perform any other unwanted sexual acts, 3) force you with threats or in any other way to have sexual intercourse with him or perform any other sexual acts against her will, 4) try or attempt to force, persuade or threaten her to have sexual intercourse with him or perform other sexual acts against her will. |
| Reproductive Health Surveys (RHS) ¹⁵ | Children’s self reports. One question. | Sexual | 1) made her have sexual relations when she did not want to |
| RHS ¹⁵ | Children’s self reports. Two questions. | Sexual | 1) did she ever feel forced because of fear (of her partner) to have unwanted sexual intercourse, 2) did he (they) ever use force to make her have sexual intercourse when she did not want to |
| RHS ¹⁵ | Children’s self reports. Two questions. | Sexual | 1) had unwanted sexual relations because of fear of her partner, 2) physically forced to have sexual relations when she did not want to |
| WHO Multi-Country Study on Women’s Health and Domestic Violence ¹⁶ | Children’s self reports. | Sexual | Physically forced you to have sexual intercourse when you did not want to, did you have any sexual intercourse you did not want to because you were afraid of what he might do, did he ever force you to do something that you found degrading or humiliating. |
| Good Schools Study (GSS) ³ | Children’s self reports. | Sexual | International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI) |

| Data source | Notes | Form of Violence | Definition of violence |
|-------------------------------|--------------------------|------------------|--|
| | | | 1) Disturbed or bothered you by making sexual comments about you? 2) Kissed you, when you did not want them to? 3) Touched your genitals or breasts when you did not want them to, or in a way that made you uncomfortable? 4) Threaten or pressure you to make you do something sexual with them? 5) Make you have sex with them, because they threatened or pressured you? 6) Had sex with you, by physically forcing you? |
| Dalal, 2013 ¹⁹ | Children's self reports. | Sexual | The survey data collected on IPV in the recent 12 months (with the latest/current husband) were transformed into the following variable: Sexual violence: had the husband ever physically forced sex when not wanted. |
| Puri, 2012 ²³ | Children's self reports. | Sexual | The dependent variable in the multivariate analysis was whether or not the individual woman reported having experienced sexual violence by her husband in the 12 months preceding the interview. This variable was based on a series of questions that were asked in the survey these questions were: Did your husband ever physically force you to have sexual intercourse with him even when you did not want to? Was there ever a time when you were afraid to say no to sex with your husband? Did your husband ever threaten you that if you didn't have sex with him he would leave or go to another woman? Did your husband ever force you to do something sexual that you found degrading or humiliating? Women who answered affirmatively to any of these questions were counted as having experienced sexual violence. Women who answered yes to any of these questions were also asked if those experiences had occurred at all in the past 12 months, and if so how frequently. Women who responded affirmatively that they had experienced one or more of these acts in the past 12 months were categorized as having experienced sexual violence in the 12 months preceding the interview. Reported prevalence for 15 to 17 year olds, included in analysis as 16 years. |
| Zablotska, 2009 ²² | Children's self reports. | Sexual | Regarding sexual coercion, women were asked. Have any of your sexual partners ever physically forced you to have sex when you did not want to? (Yes/No) and In the past 12 months, how many times did your husband/ partner physically force you to have sex |

| Data source | Notes | Form of Violence | Definition of violence |
|-------------|-------|------------------|---|
| | | | when you did not want to? At least one event was considered as a report of sexual coercion in the past 12 months. |

3.12 Definitions for meta-analysis of physical and emotional violence from authority figures

| Data source | Notes | Form of Violence | Definition of violence |
|---|--|------------------|---|
| Violence against Children Surveys (VACS) ⁴ | Children's self reports Authority figures | Physical | <p>Kenya: Now let us discuss persons of authority, such as teachers, police and military. 1) Has an authority figure ever punched you, kicked you, whipped you, or beat you with an object? 2) Has an authority figure ever used or threatened to use a knife or other weapon against you?</p> <p>Tanzania: 1) Have you ever been punched, kicked, or whipped by teachers, policemen, religious leaders, soldiers, or other authority figures? 2) Have teachers, policemen, religious leaders, soldiers, or other authority figures ever threatened to use or actually used a gun, knife, or other weapon against you?</p> <p>Haiti: Now let us discuss public authority figures who you should be able to trust, such as teachers, police, other security personnel such as MINUSTAH or UNPOL, religious leaders, or community leaders. 1) Has/did a public authority figure ever punch you, kick you, whip you, or beat you with an object? 2) Has/did a public authority figure ever choke you, smother you or tried to drown you? 3) Has/did a public authority figure ever burn or scald you intentionally (including putting hot pepper in your mouth or on another body part)? 4) Has/did a public authority figure ever use or threaten to use a knife or other weapon against you?</p> |
| Good Schools Study (GSS) ³ | Children's self reports Teachers | Physical | <p>International Society for the Prevention of Child Abuse and Neglect Screening Tool-Child Institutional (ICAST-CI)</p> <p>1) Twisted your arm or any other body part, slapped you, pushed you or thrown something at you? 2) Punched you, kicked you, or hit you with a closed fist? 3) Hit you with an object, such as a stick or a cane, or whipped you? 4) Cut you with a sharp object or burnt you?</p> |
| Haavet, 2011 ²⁴ | Children's self reports Adults | Physical | Experienced physical violence from an adult in the last 12 months. |

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Annex 4. Covariates included in regression models

In this analysis, we sought to include a range of studies using various definitions and methodologies. We used meta-regression to correct for differences in definitions and study methods as much as possible. For each set of meta-regressions below, we describe which covariates were fit for each model and give an example of STATA 14 code used to fit these models. We do not present a table with regression coefficients and model fit statistics because a separate model was run for each age, sex, and specific form of violence (meaning the total number of models we would need to present would be in the region of 200).

4.0 Physical and emotional violence from household members

For these meta regressions, all data was drawn from the MICS and DHS (which uses the MICS survey module). These surveys utilized very similar definitions and methodological characteristics, and thus we have not adjusted for any covariates in these models. Here is an example of STATA code used to fit a meta-regression model to describe the prevalence of emotional violence by household members in 2-year-old girls:

```
xi, noomit: metareg prevt i.WHOregion if form=="emo" & perpsg=="Family" & sex=="girls" &
age==2, wsse(sep) noconstant
```

Where: Prevt= prevalence estimate %, WHOregion = WHO region, form= form of violence, perpsg= perpetrator type, sex=sex of victim, age = age of victim in years, sep = standard error %.

Code used for emotional violence:

```
1. forvalues a= 2/14{
2. set more off
3. cd "H:\02 know violence\meta analysis\regions"
4. use emofamgirls.dta, clear
5. drop if proxy==0
6. drop if age!=`a'
7. xi, noomit: metareg prevt i.WHOregion if form=="emo" & perpsg=="Family" & sex=="girls" &
age==`a', wsse(sep) noconstant
8. sort WHOregion
9. gen first=1 if WHOregion!=WHOregion[_n-1]
10. drop if first!=1
11. predict emofamgirls
12. predict se_est, stdp
13. gen LL=emofamgirls-1.96*se_est
14. gen UL=emofamgirls+1.96*se_est
15. l WHOregion emofamgirls LL UL
16. keep form perpsg age sex WHOregion emofamgirls LL UL se_est
17. save "H:\02 know violence\meta analysis\regions\emofamgirls_`a'_MICS.dta", replace
18. }
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Example from log file for age 2:

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H:\02 know violence\meta analysis\regions
(15 observations deleted)
```

(504 observations deleted)

| | | | |
|---|---------------|---|--------|
| Meta-regression | Number of obs | = | 42 |
| REML estimate of between-study variance | tau2 | = | 222.2 |
| % residual variation due to heterogeneity | I-squared_res | = | 94.83% |
| Joint test for all covariates | Model F(6,36) | = | 94.48 |
| With Knapp-Hartung modification | Prob > F | = | 0.0000 |

| prevt | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] |
|---------------|----------|-----------|-------|-------|----------------------|
| _IWHOregion_1 | 64.93803 | 4.601592 | 14.11 | 0.000 | 55.60557 74.27049 |
| _IWHOregion_2 | 43.49723 | 4.912136 | 8.86 | 0.000 | 33.53496 53.4595 |
| _IWHOregion_3 | 76.92928 | 6.19335 | 12.42 | 0.000 | 64.36858 89.48997 |
| _IWHOregion_4 | 42.71171 | 4.997839 | 8.55 | 0.000 | 32.57562 52.8478 |
| _IWHOregion_5 | 67.74983 | 10.82758 | 6.26 | 0.000 | 45.79047 89.70918 |
| _IWHOregion_6 | 51.9713 | 10.86949 | 4.78 | 0.000 | 29.92695 74.01564 |

(36 missing values generated)
(36 observations deleted)
(option xb assumed; fitted values)

| | WHOreg~n | emofam~s | LL | UL |
|----|----------|----------|----------|----------|
| 1. | AFR | 64.93803 | 55.91891 | 73.95715 |
| 2. | AMR | 43.49723 | 33.86944 | 53.12502 |
| 3. | EMR | 76.92928 | 64.79031 | 89.06824 |
| 4. | EUR | 42.71171 | 32.91594 | 52.50747 |
| 5. | SEAR | 67.74982 | 46.52776 | 88.97189 |
| 6. | WPR | 51.9713 | 30.6671 | 73.2755 |

4.1 Physical and emotional violence from students

The covariates included in meta-regression models for emotional and physical violence from students were:

- Violence definition=0 if definition, 1-x if not (1) (variable name: def_phy)
 - Definition of physical violence: hit or hurt by another student at school.
 - Definition of emotional violence: something stolen from you at school, made fun of or called names at school, left out of games or activities by other students at school, made to do things you didn't want to do by other students, someone spread lies about you at school.
- Areas mixed urban and rural=0, 1 if urban (variable name: urban)
 - Area was not included in emotional violence to simplify the model because there was almost no variation in this variable.
- Subnational =0 if national, 1 if subnational. (variable name: rep)
- Interviewer trained =0 if trained, 1 if not or unclear. (variable name: interviewer)
- Recall period=0 if 12 months, 1 if under 12 months. (variable name: recallad)
- Proxy report=0 if child self reported, 1 if proxy report. (variable name: proxy)
- Study violence missing data recorded as under 5% =0, 1 if not. (variable name: missing)
- Standard Error obtained from study=0, 1 if derived. (variable name: seissue)

Here is an example of STATA code used to fit meta-regression model to describe the prevalence of physical violence from students among 8-year-old boys:

```
xi, noomit: metareg prevt i.WHOregion i.def_phy recallad rep urban interview proxy seissue
missing if form=="emo" & perpsg=="Peer_as" & sex=="boys" & age==8, wsse(sep) noconstant
```

Where: Prevt= prevalence estimate %, WHOregion = WHO region, form= form of violence, perpsg= perpetrator type, sex=sex of victim, age = age of victim in years, sep = standard error %.

Code used for physical violence:

```
1. forvalues a= 8/18{
2. set more off
3. cd "H:\02 know violence\meta analysis\regions"
4. use phystubboys.dta, clear
5. drop if age!=`a'
6. xi, noomit: metareg prevt i.WHOregion i.def_phy recallad rep urban proxy interview seissue
missing if form=="phy" & perpsg=="Peer_as" & sex=="boys" & age==`a', wsse(sep) noconstant
7. sort WHOregion
8. gen first=1 if WHOregion!=WHOregion[_n-1]
9. drop if first!=1
10. replace def_phy=0
11. replace recallad=0
12. replace rep=0
13. replace urban=0
14. replace proxy=0
15. replace interview=0
16. replace seissue=0
17. replace missing=0
18. predict phystubboys
19. predict se_est, stdp
20. gen LL=phystubboys-1.96*se_est
21. gen UL=phystubboys+1.96*se_est
22. l WHOregion phystubboys LL UL
23. keep form perpsg age sex WHOregion phystubboys se_est LL UL
24. save "H:\02 know violence\meta analysis\regions\phystubboys_`a'.dta", replace
25. }
```

Example from log file for age 8

```
H:\02 know violence\meta analysis\regions
(2,105 observations deleted)
note: _IWHOregion_1 dropped because of collinearity
note: rep dropped because of collinearity
note: urban dropped because of collinearity
note: proxy dropped because of collinearity
note: interview dropped because of collinearity
```

| | | | |
|---|----------------|---|--------|
| Meta-regression | Number of obs | = | 52 |
| REML estimate of between-study variance | tau2 | = | 227.1 |
| % residual variation due to heterogeneity | I-squared_res | = | 78.04% |
| Joint test for all covariates | Model F(10,42) | = | 34.29 |
| With Knapp-Hartung modification | Prob > F | = | 0.0000 |

| | prevt | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|---------------|-------|-----------|-----------|-------|-------|----------------------|-----------|
| _IWHOREGION_2 | | 15.9216 | 13.8489 | 1.15 | 0.257 | -12.02661 | 43.86981 |
| _IWHOREGION_3 | | 15.70263 | 13.41972 | 1.17 | 0.249 | -11.37946 | 42.78472 |
| _IWHOREGION_4 | | 9.694549 | 14.51083 | 0.67 | 0.508 | -19.58949 | 38.97859 |
| _IWHOREGION_5 | | 20.77766 | 17.91199 | 1.16 | 0.253 | -15.3702 | 56.92552 |
| _IWHOREGION_6 | | 29.17286 | 16.16236 | 1.80 | 0.078 | -3.444109 | 61.78982 |
| _IDEF_PHY_0 | | 39.06331 | 15.01724 | 2.60 | 0.013 | 8.757285 | 69.36933 |
| _IDEF_PHY_4 | | 42.9 | 16.02697 | 2.68 | 0.011 | 10.55626 | 75.24373 |
| recallad | | -21.28366 | 6.288703 | -3.38 | 0.002 | -33.97478 | -8.592546 |
| seissue | | -3.862676 | 21.16843 | -0.18 | 0.856 | -46.5823 | 38.85695 |
| missing | | 4.050647 | 6.343839 | 0.64 | 0.527 | -8.751739 | 16.85303 |

(46 missing values generated)
(46 observations deleted)
(3 real changes made)
(5 real changes made)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(3 real changes made)
(option xb assumed; fitted values)

| | WHOreg~n | phystu~s | LL | UL |
|----|----------|----------|----------|----------|
| 1. | AFR | 42.9 | 11.48714 | 74.31286 |
| 2. | AMR | 58.82159 | 39.50122 | 78.14197 |
| 3. | EMR | 54.76594 | 40.79076 | 68.74113 |
| 4. | EUR | 48.75785 | 38.01067 | 59.50504 |
| 5. | SEAR | 63.67765 | 36.78078 | 90.57452 |
| 6. | WPR | 68.23617 | 48.23888 | 88.23345 |

file H:\02 know violence\meta analysis\regions\phystuboyes_8.dta saved

4.2 Physical, emotional and sexual violence from intimate partners

The covariates included in meta-regression models for physical violence from partners were:

- Subnational =0 if national, 1 if subnational.
- Sample from community=0, 1 if school. (variable name: samp)
- Interviewer trained =0 if trained, 1 if not or unclear.
- Recall period=0 if 12 months, 1 if not.*
- Violence definition gold standard 0, 1 if not. (variable name: acts)
 - DHS, RHS, WHO VAW and Publications that asked about 5 or more acts of physical violence were set as the gold standard e.g.: DHS 1) pushed her, shaken her, thrown something at her, 2) slap her or twist her arm, 3) punched her with his fist or with something that could hurt her 4) kicked her, dragged her, 5) tried to strangle her or burn her, 6) threatened her with a knife, gun or other type of weapon.

* one estimate for approximately 18 month recall (age 15).

The covariates included in meta-regression models for emotional violence from partners were:

- Violence definition gold standard 0, 1 if not.

- DHS, RHS, WHO VAW definition was set as the gold standard; some variation but all DHS/RHS ask 2 or 3 modified CTS questions and WHO VAW 4 questions, e.g. DHS: 1) said or done something to humiliate her in front of others; 2) threatened to hurt or harm her or someone close to her; 3) insulted her or made her feel bad about herself.

The covariates included in meta-regression models for sexual violence from partners were:

- Subnational =0 if national, 1 if subnational.
- Sample from community=0, 1 if school
- Area mixed urban and rural =0, rural=1
- Violence definition gold standard =0, 1 if not.
 - DHS surveys only with 3 or more sexual violence questions and WHO VAW surveys which asked 4 questions were considered gold standard e.g.: DHS with the minimum number of 3 questions: 1) physically forced her to have unwanted sexual intercourse or 2) forced her to perform any other unwanted sexual acts, 3) forced her with threats or in any other way to perform sexual acts she did not want to.

Here are examples of STATA code used to fit meta-regression model to describe the prevalence of physical, emotional and sexual violence from students among 17-year-old girls:

Physical:

```
xi, noomit: metareg prevps i.WHOregion rep acts samp interview recallad if form=="phy" &
perpsg=="Partner" & sex=="girls" & age==17, wsse(sep) noconstant
```

Emotional:

```
xi, noomit: metareg prevps i.WHOregion acts if form=="emo" & perpsg=="Partner" & sex=="girls"
& age==17, wsse(sep) noconstant
```

Sexual:

```
xi, noomit: metareg prevps i.WHOregion acts rep samp urban if form=="sex" & perpsg=="Partner"
& sex=="girls" & age==17, wsse(sep) noconstant
```

Where: Prevs= percentage prevalence estimate adjusted by proportion of country population ever had sex by aged 20, sep = standard error %, form= form of violence, perpsg= perpetrator subgroup.

Code used for physical violence:

```
1. forvalues a= 15/19{
2. set more off
3. cd "H:\02 know violence\meta analysis\regions"
4. use phyipvgirls_220817.dta, clear
5. drop if age!=`a'
6. xi, noomit: metareg prevps i.WHOregion rep acts samp interview recallad if form=="phy" &
perpsg=="Partner" & sex=="girls" & age==`a', wsse(sep) noconstant
7. sort WHOregion
8. gen first=1 if WHOregion!=WHOregion[_n-1]
9. drop if first!=1
10. replace rep=0
```

```
11. replace acts=0
12. replace samp=0
13. replace interview=0
14. replace recallad=0
15. predict phyipvgirls
16. predict se_est, stdp
17. gen LL=phyipvgirls-1.96*se_est
18. gen UL=phyipvgirls+1.96*se_est
19. l WHOregion phyipvgirls LL UL
20. keep form perpsg age sex WHOregion phyipvgirls se_est LL UL
21. save "H:\02 know violence\meta analysis\regions\age\phyipvgirls_`a'_220817.dta", replace
22. }
```

Example of log file age 17

H:\02 know violence\meta analysis\regions
(264 observations deleted)
note: recallad dropped because of collinearity

Meta-regression
REML estimate of between-study variance
% residual variation due to heterogeneity
Joint test for all covariates
With Knapp-Hartung modification
Number of obs = 77
tau2 = 66.99
I-squared_res = 81.76%
Model F(10,67) = 16.18
Prob > F = 0.0000

| premps | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|---------------|-----------|-----------|-------|-------|----------------------|----------|
| _____+ | | | | | | |
| _IWHOregion_1 | 17.47243 | 1.857947 | 9.40 | 0.000 | 13.76395 | 21.1809 |
| _IWHOregion_2 | 12.19227 | 2.080327 | 5.86 | 0.000 | 8.039918 | 16.34462 |
| _IWHOregion_3 | 11.60345 | 5.843056 | 1.99 | 0.051 | -.0593398 | 23.26624 |
| _IWHOregion_4 | 6.267187 | 8.404799 | 0.75 | 0.458 | -10.50886 | 23.04324 |
| _IWHOregion_5 | 17.61386 | 3.435086 | 5.13 | 0.000 | 10.7574 | 24.47032 |
| _IWHOregion_6 | 5.44586 | 6.042861 | 0.90 | 0.371 | -6.615742 | 17.50746 |
| rep | 2.027575 | 8.493479 | 0.24 | 0.812 | -14.92548 | 18.98063 |
| acts | -9.205742 | 5.978464 | -1.54 | 0.128 | -21.13881 | 2.727321 |
| samp | 3.227722 | 13.22067 | 0.24 | 0.808 | -23.16085 | 29.6163 |
| interview | 2.585753 | 8.688076 | 0.30 | 0.767 | -14.75572 | 19.92722 |
| _____+ | | | | | | |

(71 missing values generated)
(71 observations deleted)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(0 real changes made)
(option xb assumed; fitted values)

| | WHOreg~n | phyipv~s | LL | UL |
|----|----------|----------|-----------|----------|
| 1. | AFR | 17.47243 | 13.83085 | 21.114 |
| 2. | AMR | 12.19227 | 8.114827 | 16.26971 |
| 3. | EMR | 11.60345 | .1510596 | 23.05584 |
| 4. | EUR | 6.267187 | -10.20622 | 22.74059 |
| 5. | SEAR | 17.61386 | 10.88109 | 24.34663 |
| 6. | WPR | 5.44586 | -6.398149 | 17.28987 |

Annex 5: Pooled meta-regression prevalence estimates of violence against children, with 95% confidence interval

Figure 5.0. Prevalence of physical and emotional violence ever perpetrated by students against boys and girls, by age of child (based on self-report)

| age | Boys Emotional | | | Boys Physical | | |
|-----|----------------|-------|-------|---------------|-------|-------|
| | Prev% | LCI | UCI | Prev% | LCI | UCI |
| 18 | 32.35 | 27.13 | 37.57 | 11.10 | 4.24 | 17.95 |
| 17 | 52.11 | 46.13 | 58.09 | 20.98 | 16.16 | 25.81 |
| 16 | 51.31 | 47.35 | 55.27 | 19.21 | 16.15 | 22.27 |
| 15 | 52.97 | 49.71 | 56.22 | 22.06 | 19.37 | 24.76 |
| 14 | 54.54 | 51.67 | 57.41 | 24.58 | 21.91 | 27.25 |
| 13 | 55.37 | 52.08 | 58.66 | 26.10 | 23.46 | 28.74 |
| 12 | 56.43 | 52.36 | 60.50 | 31.51 | 27.84 | 35.18 |
| 11 | 83.27 | 78.23 | 88.31 | 51.13 | 47.43 | 54.83 |
| 10 | 83.37 | 79.32 | 87.42 | 53.22 | 49.13 | 57.31 |
| 9 | 82.21 | 77.25 | 87.17 | 53.76 | 48.68 | 58.85 |
| 8 | 73.42 | 63.18 | 83.67 | 53.75 | 42.70 | 64.80 |

| age | Girls Emotional | | | Girls Physical | | |
|-----|-----------------|-------|-------|----------------|-------|-------|
| | Prev% | LCI | UCI | Prev% | LCI | UCL |
| 18 | 27.90 | 21.66 | 34.15 | 9.22 | 3.51 | 14.94 |
| 17 | 55.25 | 44.27 | 66.23 | 17.70 | 9.69 | 25.71 |
| 16 | 51.38 | 46.61 | 56.15 | 16.35 | 13.19 | 19.51 |
| 15 | 53.84 | 50.23 | 57.45 | 16.56 | 13.85 | 19.28 |
| 14 | 53.22 | 50.16 | 56.29 | 15.64 | 11.92 | 19.36 |
| 13 | 52.90 | 49.94 | 55.86 | 16.72 | 13.75 | 19.68 |
| 12 | 54.88 | 50.19 | 59.57 | 23.56 | 19.60 | 27.52 |
| 11 | 80.18 | 75.45 | 84.91 | 39.94 | 35.93 | 43.94 |
| 10 | 78.72 | 74.54 | 82.91 | 42.89 | 38.79 | 46.99 |
| 9 | 79.33 | 74.62 | 84.03 | 43.67 | 38.79 | 48.55 |
| 8 | 74.84 | 66.64 | 83.04 | 48.97 | 40.77 | 57.17 |

Abbreviations: Prev%: Prevalence estimate; LCI: Lower 95% confidence interval; UCI: Upper 95%CI

Figure 5.1. Prevalence of physical and emotional violence ever perpetrated by household members against boys and girls, by age of child (based on proxy report from household member)

| age | Boys Emotional | | | Boys Physical | | |
|-----|----------------|-------|-------|---------------|-------|-------|
| | Prev% | LCI | UCI | Prev% | LCI | UCI |
| 14 | 67.89 | 60.94 | 74.84 | 40.87 | 33.8 | 47.94 |
| 13 | 72.12 | 65.93 | 78.32 | 47.7 | 39.61 | 55.79 |
| 12 | 73.24 | 66.44 | 80.04 | 53.08 | 45.53 | 60.62 |
| 11 | 75.11 | 67.97 | 82.24 | 54.2 | 46.5 | 61.9 |
| 10 | 75.76 | 68.51 | 83.01 | 57.32 | 49.66 | 64.97 |
| 9 | 74.56 | 67.48 | 81.64 | 61.69 | 54.39 | 68.99 |
| 8 | 74.46 | 67.08 | 81.85 | 60.86 | 53.12 | 68.6 |
| 7 | 74.36 | 67.30 | 81.43 | 64.67 | 57.71 | 71.63 |
| 6 | 72.96 | 66.56 | 79.37 | 64.99 | 57.36 | 72.63 |
| 5 | 72.60 | 65.27 | 79.93 | 65.25 | 57.85 | 72.64 |
| 4 | 69.99 | 62.79 | 77.19 | 64.79 | 58.46 | 71.13 |
| 3 | 68.24 | 60.84 | 75.64 | 63.28 | 56.62 | 69.94 |
| 2 | 61.16 | 53.37 | 68.95 | 58.65 | 51.76 | 65.54 |

| age | Girls Emotional | | | Girls Physical | | |
|-----|-----------------|-------|-------|----------------|-------|-------|
| | Prev% | LCI | UCL | Prev% | LCI | UCI |
| 14 | 65.21 | 58.85 | 71.57 | 35.86 | 28.16 | 43.55 |
| 13 | 67.01 | 60.52 | 73.50 | 40.06 | 32.47 | 47.65 |
| 12 | 70.60 | 64.01 | 77.18 | 46.14 | 38.18 | 54.11 |
| 11 | 70.38 | 63.74 | 77.03 | 47.20 | 39.01 | 55.39 |
| 10 | 71.52 | 64.06 | 78.98 | 52.80 | 45.46 | 60.15 |
| 9 | 73.47 | 66.95 | 79.99 | 55.53 | 47.09 | 63.97 |
| 8 | 72.56 | 65.85 | 79.26 | 57.46 | 50.53 | 64.39 |
| 7 | 73.72 | 66.97 | 80.47 | 60.83 | 52.90 | 68.75 |
| 6 | 71.07 | 63.98 | 78.15 | 60.38 | 52.75 | 68.01 |
| 5 | 70.91 | 63.30 | 78.52 | 60.58 | 52.93 | 68.22 |
| 4 | 69.93 | 62.66 | 77.21 | 63.15 | 55.98 | 70.32 |
| 3 | 65.84 | 58.54 | 73.14 | 60.87 | 54.31 | 67.43 |
| 2 | 59.85 | 52.09 | 67.61 | 56.24 | 49.20 | 63.28 |

Abbreviations: Prev%: Prevalence estimate; LCI: Lower 95% confidence interval; UCI: Upper 95%CI

Figure 5.2. Prevalence of sexual, physical and emotional violence ever perpetrated by intimate partners against girls, by age of girl (based on self-report)

| Girls Sexual | | | |
|-----------------|-------|-------|-------|
| age | Prev% | LCI | UCI |
| 19 | 5.17 | 3.29 | 7.04 |
| 18 | 5.86 | 3.67 | 8.04 |
| 17 | 3.66 | 1.99 | 5.33 |
| 16 | 3.40 | 1.21 | 5.58 |
| 15 | 1.50 | -0.34 | 3.35 |
| Girls Physical | | | |
| age | Prev% | LCI | UCI |
| 19 | 12.55 | 10.10 | 15.00 |
| 18 | 11.73 | 9.14 | 14.32 |
| 17 | 12.92 | 9.29 | 16.55 |
| 16 | 10.01 | 6.20 | 13.81 |
| 15 | 7.06 | 3.28 | 10.85 |
| Girls Emotional | | | |
| age | Prev% | LCI | UCI |
| 19 | 13.24 | 10.01 | 16.47 |
| 18 | 12.98 | 10.05 | 15.90 |
| 17 | 9.48 | 6.32 | 12.64 |
| 16 | 8.27 | 4.85 | 11.69 |
| 15 | 8.07 | 4.11 | 12.03 |

Abbreviations: Prev%: Prevalence estimate; LCI: Lower 95% confidence interval; UCI: Upper 95%CI

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Annex 7: Data sources available for prevalence of violence against children estimates

Table 7.0. Number of violence estimates (sexual, physical, emotional or neglect) per WHO region for each dataset source included in the current study

| Source | WHO region | | | | | | Total |
|----------------------|--------------------------|---------------------------|---|---------------------------|---------------------------------------|-------------------------------------|--------|
| | AFR African region | AMR Americas region | EMR Eastern Mediterranean region | EUR European region | SEAR South- east Asia region | WPR Western Pacific region | |
| DHS | 702 | 303 | 195 | 88 | 59 | 52 | 1,399 |
| RHS | 0 | 116 | 0 | 0 | 0 | 0 | 116 |
| WHO | 40 | 32 | 0 | 4 | 52 | 16 | 144 |
| MICS | 416 | 520 | 208 | 468 | 104 | 104 | 1,820 |
| VACS | 144 | 70 | 0 | 0 | 0 | 0 | 214 |
| GSHS | 394 | 506 | 278 | 236 | 28 | 248 | 1,690 |
| HBSC | 0 | 24 | 0 | 984 | 0 | 0 | 1,008 |
| PIRLS | 84 | 357 | 380 | 1,148 | 48 | 174 | 2,191 |
| TIMSS | 272 | 420 | 1,272 | 1,464 | 118 | 574 | 4,120 |
| GSS | 432 | 0 | 0 | 0 | 0 | 0 | 432 |
| Optimus | 0 | 0 | 0 | 0 | 0 | 152 | 152 |
| EU kids | 0 | 0 | 0 | 400 | 0 | 0 | 400 |
| Systematic review | 3 | 31 | 0 | 86 | 8 | 16 | 144 |
| Total | 2,487 | 2,379 | 2,333 | 4,878 | 417 | 1,336 | 13,830 |

Abbreviations: DHS: Demographic and Health Surveys; RHS: Reproductive Health Surveys; WHO: World Health Organization; MICS: Multiple Indicator Cluster Surveys; VACS: Violence against Children Surveys; GSHS: Global Student Health Surveys; HBSC: Health Behaviour in School-Aged Children; PIRLS: Progress in International Reading Literacy Study; TIMSS: Trends in International Mathematics and Science Study; GSS: Good Schools Study.

Annex 7. Number of prevalence estimates of violence against children per perpetrator grouping, by form of violence (sexual, emotional, physical, or neglect) and sex of child

Single forms of violence were selected with sex and perpetrator groupings containing an adequate number of estimates to be eligible for meta-regression or meta-analysis, over 50 estimates (dark grey), or identified for presenting un-pooled single estimates in forest plots for groupings of related perpetrators (light grey).

| Perpetrator | Sex | Single form of violence | | | Combined forms of violence | | | | | Total |
|-------------------------------|-------|-------------------------|----------|--------|----------------------------|----------------------------------|--------------------|---------------------------------|---|-------|
| | | Emotional | Physical | Sexual | Physical or emotional | Physical or emotional or neglect | Physical or sexual | Physical or emotional or sexual | Physical or emotional or sexual or witnessing | |
| Any perpetrator(4) | Boys | 19 | 21 | 52 | 19 | 0 | 0 | 0 | 1 | 112 |
| | Girls | 19 | 20 | 66 | 19 | 0 | 0 | 0 | 1 | 125 |
| Adults and authority figures: | | | | | | | | | | |
| Authority figures | Boys | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | Girls | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| Teacher | Boys | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Girls | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| Adult | Boys | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Girls | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Gang or group | Boys | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Girls | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Multiple perpetrators | Boys | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | Girls | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| Rather not say | Boys | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Girls | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| Other | Boys | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Girls | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| Other family member | Boys | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Girls | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |

| | | Single form of violence | | | Combined forms of violence | | | | | |
|---|-------|-------------------------|-----------|--------|----------------------------|----------------------------------|--------------------|---------------------------------|---|--------|
| | | | | | | Physical or emotional or neglect | Physical or sexual | Physical or emotional or sexual | Physical or emotional or sexual or witnessing | |
| Perpetrator | Sex | Emotional | Physical | Sexual | Physical or emotional | | | | | Total |
| Partner | Boys | 8 | 23 | 8 | 0 | 0 | 0 | 0 | 0 | 39 |
| | Girls | 317 | 348 | 329 | 3 | 0 | 48 | 271 | 0 | 1,316 |
| Peers | Boys | 1 | 0 | 0 | 226 | 0 | 0 | 0 | 0 | 227 |
| | Girls | 1 | 1 | 0 | 226 | 0 | 0 | 0 | 0 | 228 |
| Student | Boys | 1,555 (1) | 2,173 (2) | 16 | 895 | 0 | 0 | 0 | 0 | 4,639 |
| | Girls | 1,507 (1) | 2,108 (2) | 16 | 879 | 0 | 0 | 0 | 0 | 4,510 |
| Caregiver/ parent/ household member (3) | | | | | | | | | | |
| | Boys | 561 | 589 | 8 | 0 | 19 | 0 | 0 | 0 | 1,177 |
| | Girls | 561 | 589 | 8 | 0 | 19 | 0 | 0 | 0 | 1,177 |
| Total | Boys | 2,176 | 2,882 | 116 | 1,140 | 19 | 0 | 0 | 1 | 6,334 |
| Total | Girls | 2,437 | 3,142 | 451 | 1,127 | 19 | 48 | 271 | 1 | 7,496 |
| Total | | 4,613 | 6,024 | 567 | 2,267 | 38 | 48 | 271 | 2 | 13,830 |

(1) Emotional cyber bullying was not included in regression models estimating emotional violence perpetrated by students against other students (there were a total of 252 boy and 252 girl estimates of cyber bullying).

(2) Separate estimates for boy-student perpetrators and girl-student perpetrators were not included in meta-regression. Models presented estimate prevalence from any student irrespective of the perpetrators sex (there were 48 boy- and 48 girl-student perpetrator estimates provided).

(3) Adult proxy reports of violence from household members and children’s self-reports of violence from caregiver, parent or household member were analysed separately in meta-regression and meta-analysis, respectively.

(4) Sexual violence from any perpetrator is not presented in this paper.

Annex 8. Children's self-reports of violence perpetrated by caregivers, by age of child, data source, and country.

Figure 8.0. Prevalence of physical violence perpetrated by caregivers against girls, in the past 12 months (based on self-report)

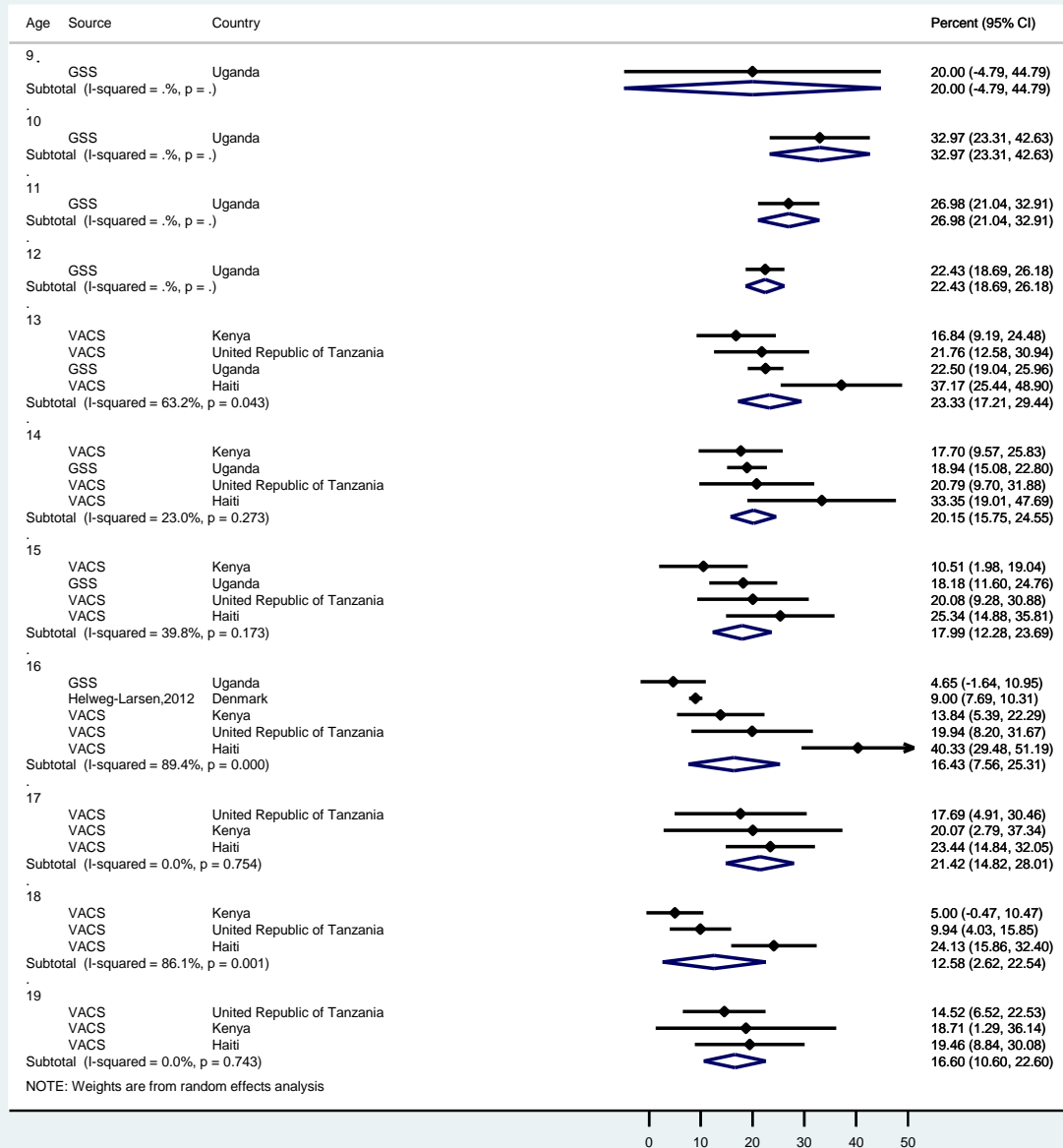


Figure 8.1. Prevalence of physical violence perpetrated by caregivers against boys, in the past 12 months (based on self-report)

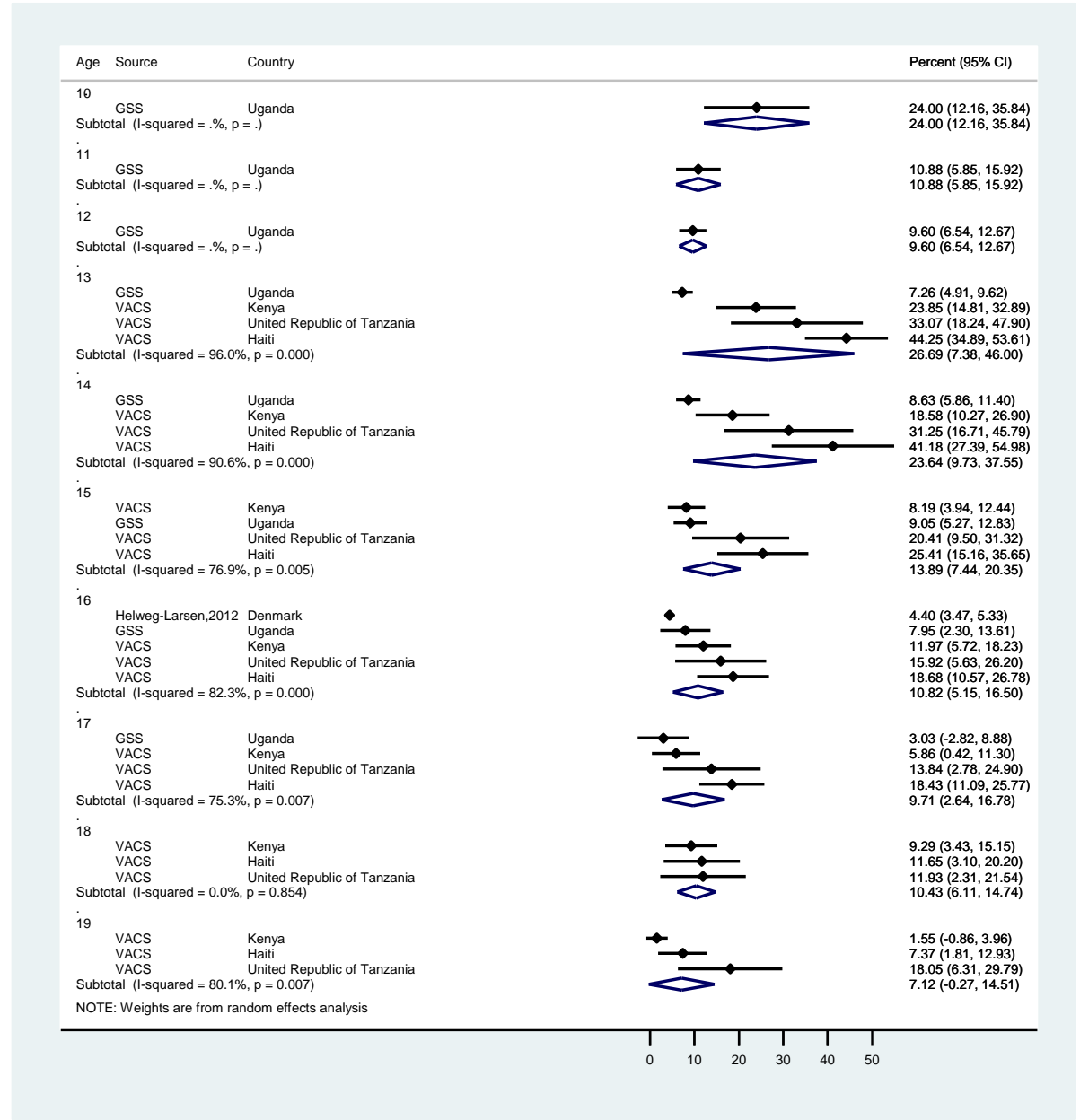


Figure 8.2. Prevalence of emotional violence perpetrated by caregivers against girls, in the past 12 months (based on self-report)

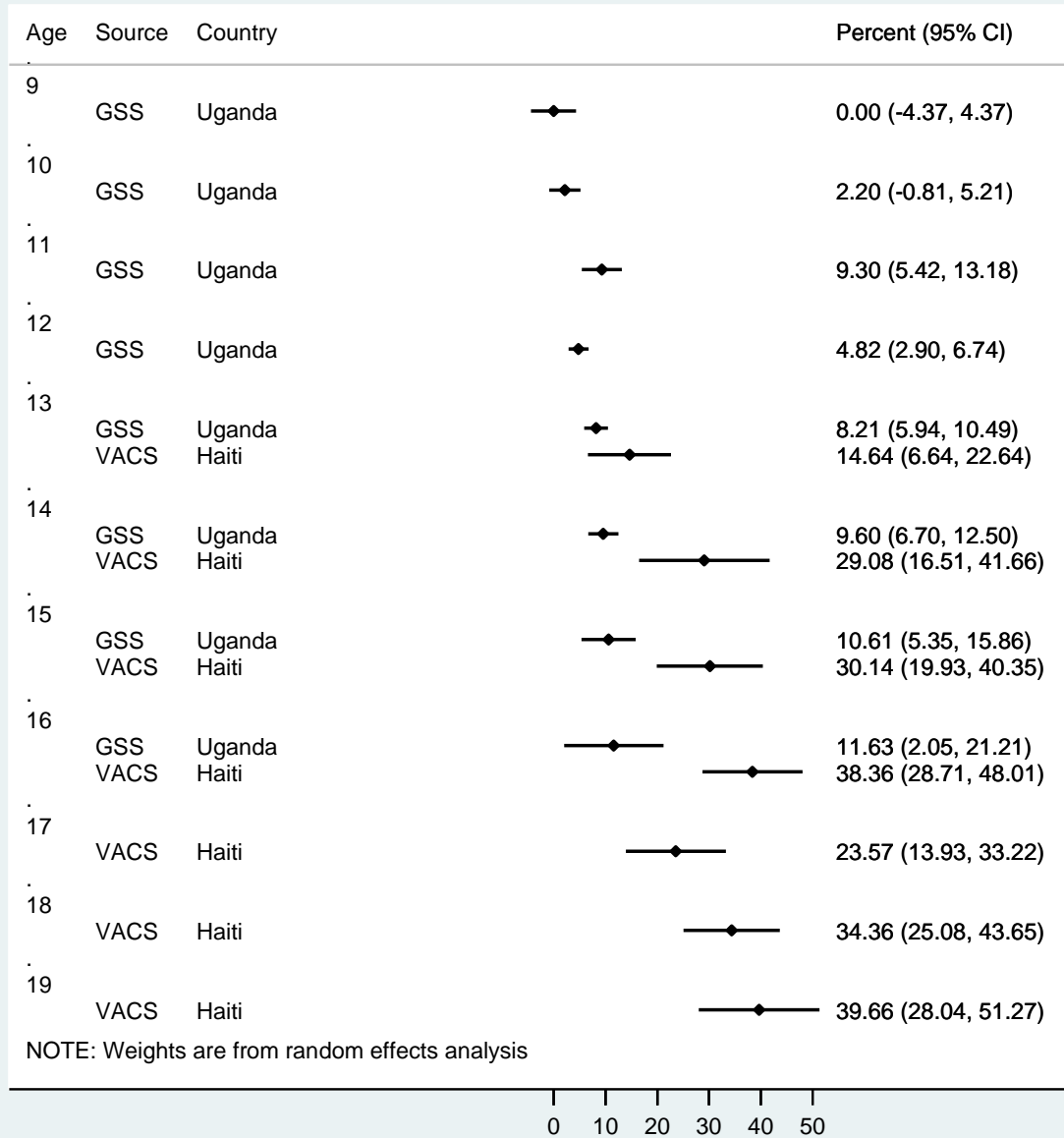
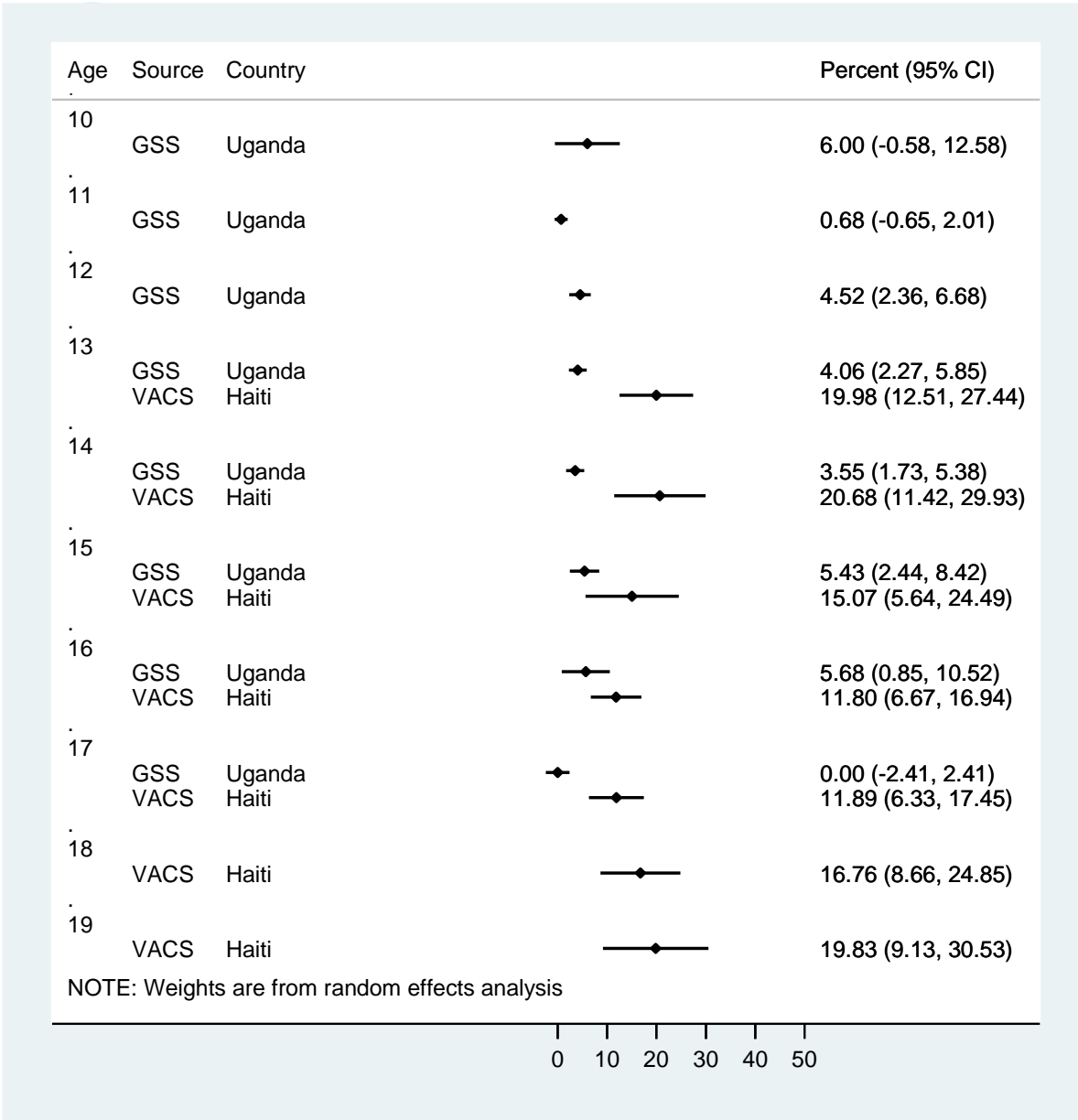
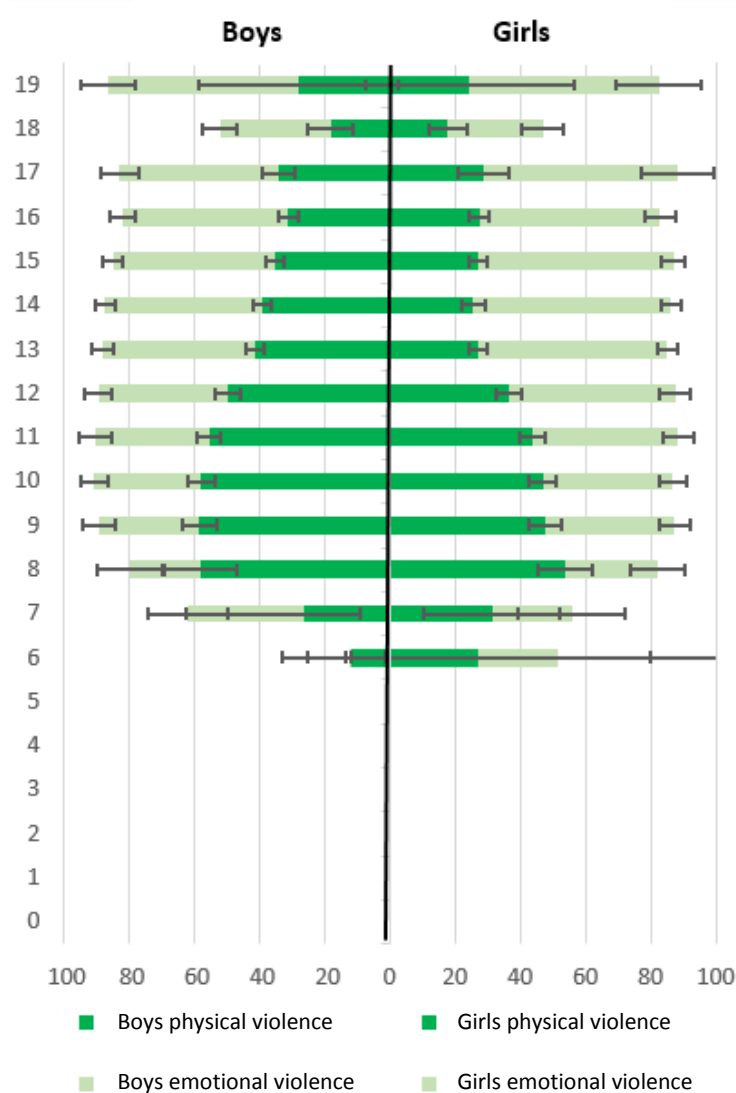


Figure 8.3. Prevalence of emotional violence perpetrated by caregivers against boys, in the past 12 months (based on self-report)



Annex 9. Physical and emotional violence perpetrated by students against boys and girls in school and physical, emotional and sexual partner violence against girls among ever partnered girls.

Figure 9.1. Prevalence of physical and emotional violence perpetrated by students against boys and girls in school in the past year (based on self-report).



Notes: Estimates provided without adjustment for the WHO regional estimation proportion of students attending primary and secondary schools. Data sources: Global School-Based Health Surveys (GSHS), Health Behaviour in School-Aged Children (HBSC), Progress in International Reading Literacy Study (PIRLS), Trends in International Mathematics and Science Study (TIMSS) and systematic review publications. Definitions are provided in Annex 3. Pooled prevalence estimates at ages 6, 7 and 19 years are from unadjusted meta-analyses, all others are adjusted meta-regression estimates. To read bar graph: age of the child is on the y-axis; prevalence of each form of violence is on the x axis. Prevalence corresponds to the distance of the bar along the x-axis for boys (to the left), and girls (to the right). Forms of violence are overlaid; and the black bars are a 95% confidence interval.

Figure 9.2. Prevalence of physical, emotional and sexual partner violence against girls, estimated by age and for ever partnered girls.

| Violence type | sex | age | Global estimate | lower CI | Upper CI |
|---------------|-------|-----|-----------------|----------|----------|
| Physical | girls | 15 | 9.15 | 3.73 | 14.57 |
| Physical | girls | 16 | 13.78 | 8.60 | 18.95 |
| Physical | girls | 17 | 15.60 | 10.46 | 20.74 |
| Physical | girls | 18 | 15.02 | 11.27 | 18.76 |
| Physical | girls | 19 | 15.60 | 12.17 | 19.04 |
| Emotional | girls | 15 | 11.91 | 5.79 | 18.04 |
| Emotional | girls | 16 | 15.49 | 10.09 | 20.88 |
| Emotional | girls | 17 | 11.21 | 7.51 | 14.91 |
| Emotional | girls | 18 | 16.34 | 12.69 | 19.99 |
| Emotional | girls | 19 | 19.05 | 14.69 | 23.41 |
| Sexual | girls | 15 | 1.89 | 0.00 | 4.34 |
| Sexual | girls | 16 | 6.96 | 2.52 | 11.40 |
| Sexual | girls | 17 | 5.10 | 2.32 | 7.89 |
| Sexual | girls | 18 | 8.38 | 5.36 | 11.39 |
| Sexual | girls | 19 | 6.29 | 3.50 | 9.08 |

Notes: Ever partnered definition covariate in regression models: Study denominator definitions were categorised into similar groups creating a variable called “popug”, where 0= ever married/ever partnered, and 1 currently married, 2 currently married/current partner, 3 currently married, 5 general population. Popug was added as a covariate in the meta-regression models, for example for partner physical violence: xi, noomit: metareg prevp i.WHOregion i.popug rep acts samp interview recallad if form=="phy" & perpsg=="Partner" & sex=="girls" & age=="a", wsse(sep) noconstant